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The Second Half Looks GOOD

*Continued Activity of General Business Provides Sound Basis for
Confidence in the Remaining Months of the Year*

By Donald Blanchard

DEFINITE improvement in the time payment situation and retail sales and profits for the first half of 1927 comparing favorably with the corresponding period of last year, are indicated by a nation-wide survey conducted by COMMERCIAL CAR JOURNAL in which 170 truck dealers, distributors and factory branches participated.

Paralleling this excellent showing by the trade is the accomplishment of the manufacturing end of the industry with a six months' total for factory sales of about 268,000 trucks and buses, a new all-time record for the first half of the year.

What the remaining months of the year hold for the truck industry is, of course, the focal point of current interest. On this point, there is a widespread feeling of confidence that truck business will maintain satisfactory levels during the last six months of 1927. The fact that the consensus of opinion among competent observers of economic trends is conservatively optimistic, provides a sound basis for this feeling inasmuch as the fortunes of the truck industry are largely determined by the trend of business in general.

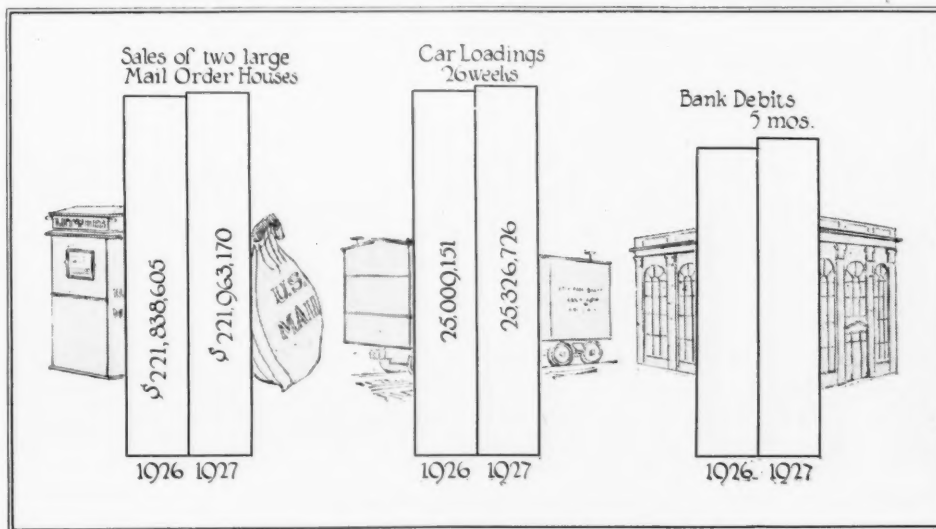
One of the

outstanding developments of the last six months is the general tendency to tighten up on time payment sales. The generally more rigid credit requirements now in force are placing the business on a sounder basis and, while their effect may be temporarily to restrict volume, they have exactly the opposite effect on profits which, after all, are what count.

Loose extension of credit to time purchasers had a serious effect on last year's profits and it is reassuring to note that policies adopted to reform this phase of the business, are being applied effectively. In the COMMERCIAL CAR JOURNAL survey, 168 reports on the time payment situation were received and of these 127, or roughly 75 per cent, state that the tendency during the last year has been to tighten up on credits of this character. That this is a general tendency and not peculiar to any particular section is indicated by the accompanying tabulation of the

replies received in the survey.

From the standpoint of the manufacturer particularly, another outstanding development of the first half has been the large increases in export sales. On the basis of available figures it seems probable now that foreign shipments for



Three indicators of business volume—mail order sales, revenue freight car loadings and bank debits—all show gains over last year

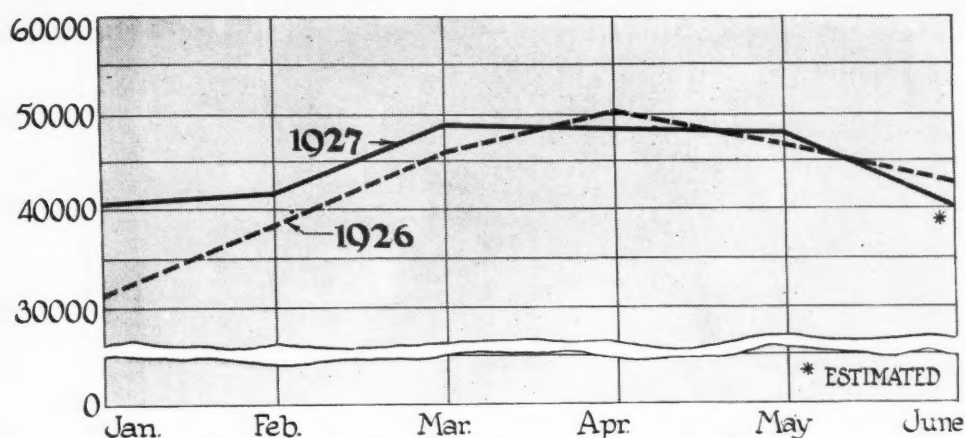


Chart showing how 1927 monthly production of trucks in the United States and Canada compares with last year

the six months ending June 30 will amount to about 57,000 vehicles as compared with 35,671 in the same period of 1926. This is an increase of about 60 per cent. Inasmuch as foreign sales help to iron out the inequalities in domestic demand and thus to stabilize production this gain in truck exports is of considerable significance.

Handling the used truck seems to present the trade with about the same difficulties as a year ago and it appears probable that this phase of truck merchandising will continue to require the most skillful management for some time to come. The survey indicates that there has been little or no change in the situation during the last year, as 51 state that there has been an improvement, 57 report that conditions are worse, while 60 estimate conditions to be the same. However, the survey reports give evidence that the trade has the situation in hand, as is indicated by its first-half showing of net profits.

Net Profits Better

Of the 170 truck merchants reporting on their net earnings, 79 have made increased profits during the first half as compared with the corresponding period in 1926. Smaller earnings are reported by 53, while 38 place their profits equal to last year. In other words, 69 per cent report that their earnings this year are ahead or equal to last year's first half showing.

This showing is particularly significant in view of the fact that retail sales of new trucks in the United States probably were slightly behind the first half of 1926. It indicates that volume is not the one sure route to profits as much can be accomplished to improve earnings by controlling the time payment and used truck situations.

While actual sales probably are somewhat less than last year, the survey reports, as shown in the accompanying tabulation, give a contrary indication as 86 report larger sales, 28 the same volume and 56 a smaller turnover. Other statistical evidence, however, does not bear out the survey on this point.

We are accustomed to talk in terms of total production figures but these do not give a correct estimate of the number of vehicles being sold in the domestic market. To get a true picture of the situation, both Canadian output and U. S. exports must be deducted as has been done in the following table:

	First Six Months	
	1926	1927
Total truck production	257,630	267,684*
Less Canadian production and U. S. exports	57,842	78,984*
Available for sale in the United States.....	199,788	188,700

* June estimated. Production means factory sales.

The decrease shown by the table is not large and probably was to be expected in view of the tendency to place time payment sales on a sounder basis. At the time credit policies were revised, it was recognized that volume would suffer temporarily but it was expected that net profits would be affected favorably. The survey indicates that as far as the trade is concerned, this expectation is being fulfilled quite generally. What the immediate effect has been on manufacturing profits is impossible to determine as there is no

comprehensive information on this point. In the long run there is no question but that the results will be favorable.

Reasonably complete figures covering actual retail truck sales as indicated by registrations of new trucks are available only for the first four months of the year. These figures tend to support the conclusion drawn from Table I. The distribution of sales between the various makes has undergone considerable change in some cases, with a number of the moderate and smaller-sized producers showing up especially well.

Ford's production during the first six months appears to have dropped off considerably in comparison with last year. Up to June 1, his output probably was about 25 per cent behind last year and represented approximately one-third of the industry's total, as compared with 42 per cent of the 1926 total and in some preceding years considerably over 50 per cent. Whether the introduction of his new passenger car model will have any effect on his truck program is impossible to predict as no announcement concerning this point has been forthcoming.

This year's record output is due entirely to gains in the production of trucks rated at 2½ tons and under as the output of the larger sizes and of bus chassis is running behind last year. The increased output of the lighter vehicles is of particular interest in view of the slump in Ford operations.

Turning now to general economic conditions to which truck sales are so closely related, the outlook appears favorable. Probably the number of records broken will not be so large this year as last but nevertheless busi-



This map explains the zone classification used in the analysis of the survey reports opposite

ness activity undoubtedly will maintain a relatively high level. The truck industry may prove to be one of the exceptions to the rule, however, for if the pace set during the first six months of the year is maintained, total output of trucks in 1927 will reach the 500,000 mark, an increase of nearly 9,000 over last year's record production.

Despite the uncertainty regarding the immediate future that prevailed at the first of the year, now that the records are in it is evident that business has been proceeding at a substantial rate. Revenue freight car loadings which reflect the national demand for transportation, totaled 25,326,726 for the first half year, a gain of about one per cent over the same period in 1926. Indicative of the high rate of consumption prevailing during recent months is the fact that the sales of two large mail order houses amounted to \$221,963,170 for the half year, a slight gain over last year, which was considered unusually prosperous. Another indicator of business volume is debits to individual bank accounts which for the five months ending May 31, 1927, are about three per cent ahead of the same period in 1926. Money continues to be easy. Building operations, which provide a large truck market, are being carried on in large volume and show no evidence of any real recession.

Prices have tended downward for some time but the recent upward swings in agricultural prices have tended to stabilize the indexes. The higher price levels being reached by farm commodities will tend, of course, to increase rural purchasing power which reacts naturally to the advantage of industry. This favorable influence, however, is offset to some extent by unfavorable crop reports from some sections.

As to industrial employment, a survey made by the National Association of Manufacturers covering 2203 companies, reveals the fact that industry now is operating at a high level and will continue to do so for the next three months at least. From this survey it is estimated that employment is at 81 per cent of maximum employment capacity. The Department of Labor indexes bear this survey out and its figures for May indicate

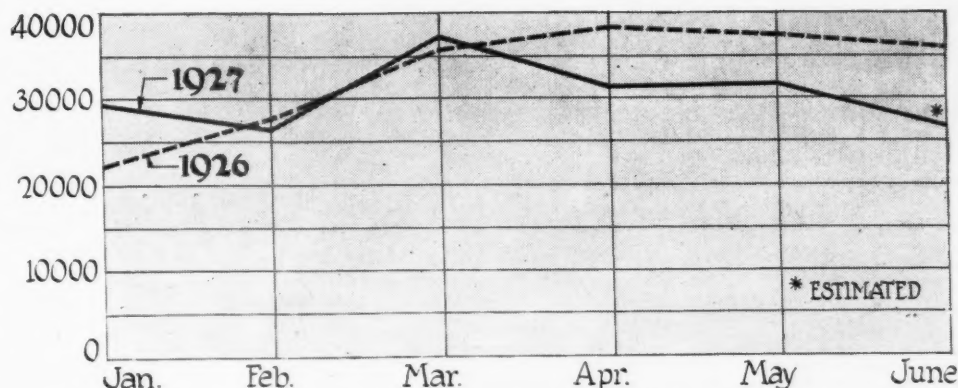


Chart showing 1927 and 1926 first half net monthly production after deduction of exports and Canadian output

that per capita earnings actually increased in May although the number employed was about one per cent less than a year ago.

On the outlook for the second half of the year, the National Bank of Commerce says: "Business is in the midst of one of those moderate and orderly readjustments by which production and consumption have been kept closely in balance for the last five years. Activity is not so great as it was at this time in 1926, and the first half of 1927 has not equaled the high records which were being established last year. But this is a reason for confidence rather than pessimism, for it is by precisely this sort of orderly readjustment in previous years that stability has been so successfully maintained.

"As a matter of fact, the volume of business done has probably exceeded what was really anticipated at the beginning of the year. Particularly in view of such untoward events as the Mississippi floods, generally unseasonable weather and the bituminous coal strike, the persistently sustained flow of goods through production into consumer's hands reveals a thoroughly sound position. The present outlook is for a good and moderately expanding rate of business activity during the second half year."

On current business conditions, the same authority says: "That the reasonable activity of the first half of the year will continue in the second half seems well indicated by the position of the great producing industries. The steel industry has operated at a very good rate, and output for the first half of 1927 will fall only slightly below the record figure of a year ago. Current curtail-

(Turn to page 22, please)

TABULATION OF SURVEY REPLIES

		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Total U. S.
How do your truck sales for the first half of 1927 compare with the first half of 1926?	Larger	5	18	8	14	9	8	8	5	11	86
	Same	1	7	3	7	4	1	4	1	..	28
	Smaller	4	12	3	11	7	5	4	1	9	56
How do your net profits on truck sales during the first half of 1927 compare with first half of 1926?	Larger	6	15	6	14	9	7	8	3	11	79
	Same	1	12	3	10	3	2	4	2	1	38
	Smaller	3	10	5	8	8	5	4	2	8	53
Has there been any improvement in the used truck situation?	Better	..	10	2	10	5	7	6	3	8	51
	Same	8	13	6	13	6	3	3	1	7	60
	Worse	2	13	6	8	9	4	7	3	5	57
Has there been any tendency to tighten up on time sales in your territory during the past year?	Yes	7	25	10	27	14	11	12	5	16	127
	No	3	11	4	5	6	3	4	2	3	41

150 Detroit Garages Sell

Definite Scale of Commissions Paid to Garageman on Sales Made to Prospects Furnished by Them

THE constant application of aggressive methods of disposing of used trucks taken in trade has enabled the Federal-Detroit branch to hold its used truck inventory down to a reasonable figure at all times during the past year or so and to keep trading regularly, thus securing the largest possible volume of new truck sales.

The Federal-Detroit branch sells a lot of new trucks. But the management places emphasis on the used truck department, because unless the used trucks taken in trade are kept moving, the used truck inventory will soon become so large as to necessitate shutting down on trading, and new truck sales will suffer. As it is, the Federal-Detroit branch operates on the assumption that every sale of a new truck will involve taking a used truck in trade and makes its plans accordingly. These plans have resulted in the sale of an average of almost one used truck a day the year around and have made it unnecessary for the new truck department to let up on trading at any time since they were introduced.

Several features of this used truck department are worthy of consideration. Chief among these are the appraisal and reconditioning of used trucks, the methods of getting prospects, the methods of selling, and the plan of remunerating salesmen.

There is an adage to the effect that goods bought right are half sold, and the Federal-Detroit branch makes every effort to buy used trucks right. To this end it employs an appraiser, who works under the direction of the used truck manager, and undertakes

to buy every used truck at a price that will enable it to break at least even on the transaction, including the overhead of the used truck department.

"When a new truck salesman finds that his prospect has something to trade," L. E. Craig, used truck manager explained, "negotiations practically cease right there until we get a reliable report on what his used truck will bring on the local market. Our appraiser goes out and makes a thorough inspection and reports its actual value, then we set a price we know it will bring. Every used truck has to be appraised on its own merits; there is no such thing as a blue book value, such as there is for used cars, because so much depends on the work in which the

GARAGE PROSPECT REPORT

Name of Garage	Owner
Address	Tel. No.
Date 192	Date Contract Signed 192
Is Owner interested?	
Will he furnish prospect information?	
How does he conduct his business?	
Will he be active?	
Did you sign him up on contract?	
Did you leave copy of bulletin?	
REMARKS:	
SALESMAN	

SALESMAN'S FOLLOW-UP REPORT

Prospect	Date
Address	City
Interviewed Mr.	
Remarks	
Date to be called on again	
Salesman	

PROSPECT INFORMATION

Name	Date
Address	
Interview Mr.	
Remarks:	
Name of Party who gave Information	
For Salesman	Date Allotted

SALESMAN'S FIRST REPORT

Prospect	Date
Address	City
Buyer	Phone Business
Model Wanted	Body Type
Trade in	
Buying When?	Immediately 30 Days 60 Days 90 Days If Later When
Must be Seen Again When?	
Favors What Make of Truck?	
Present Equipment (See Other Side)	
Salesman	

Various forms used by Federal-Detroit in connection with new and used truck sales

Used Trucks *for Federal*



L. E. Craig,
used truck manager,
Federal-Detroit

truck has been engaged and the care that has been taken of it. We buy them right, because we know we've got to sell them. The new truck salesman knows something about this too, for in order to make the 'Star Club,' he has to sell \$7,500 worth of used trucks a year, besides selling a certain volume of new ones.

"We recondition every used truck that is at all worth it, and we repaint practically all of them. That makes the selling job easier. A \$30 paint job is worth \$100 when it comes to selling a used truck."

Having bought a used truck right and reconditioned it, the next problem is to find a prospective buyer. This the Federal-Detroit branch does in the usual ways, such as following up owners and advertising, and by securing the cooperation of garagemen and others who are in position to come in contact with such prospects. The branch has lined up about 150 of the leading garages of the city and entered into a formal contract with them whereby they are to report all prospects for new and used trucks for a stated commission on all sales made within 30 days to such prospects; provided, of course, the prospect has not already been listed. The commission varies from \$5 on a unit that sells for \$50 to \$100, to \$50 on one that sells for \$4,000 to \$5,000.

All the garageman has to do is call the used truck

department on the telephone and give the name and address of the prospect, together with such information as he may have gathered as to the kind of job in which the prospect is interested. A prospect card is then made out, a salesman from the branch immediately calls on the garageman to secure any additional information that may be available, and proceeds to follow up the prospect and make the sale if possible. When the sale is made, the branch sends the garageman a check, which is just that much "velvet" for him.

By way of cooperating with the garagemen, though, the branch sends them a printed list of used trucks on hand, together with selling prices, twice each month, and they are privileged to go over this list with prospects to show them the many excellent values the branch has on hand, and, if possible, select one or more in which the prospect is likely to be interested. The same list is also mailed to about 2500 truck owners.

Publishing such a list places the dealer at something of a disadvantage, however, and to compensate for this, the identity of the trucks listed is concealed and the prices are set for trading purposes. In parenthesis after each listing is a number, but this number is not the same as that which appears on the truck. It is merely for the convenience of the garageman or

(Turn to page 22, please)

MEMO AGREEMENT—GARAGE OWNERS

(I) (We).....do hereby promise to inform the Federal Motor Truck Company of any prospects (I) (we) may know of or obtain, who may be in the market for a new or used truck or other vehicle offered for sale by Federal Motor Truck Company (Detroit Branch), such notification to be by telephone or written report as Federal Motor Truck Company may require.

In consideration of above prospect information, should Federal Motor Truck Company effect sale of a new or used truck or other vehicle as a result of prospect information received from above person or persons, then the Federal Motor Truck Company will pay a premium as follows:

Units from \$ 50.00 to \$ 100.00.....	\$ 5.00
Units from 100.00 to 300.00.....	10.00
Units from 300.00 to 500.00.....	15.00
Units from 500.00 to 1000.00.....	20.00
Units from 1000.00 to 2000.00.....	25.00
Units from 2000.00 to 2500.00.....	30.00
Units from 2500.00 to 3000.00.....	35.00
Units from 3000.00 to 3500.00.....	40.00
Units from 3500.00 to 4000.00.....	45.00
Units from 4000.00 to 5000.00.....	50.00

It being understood, however, that in the event the prospect is already listed in the Federal Motor Truck Company's prospect files as a prospect by one of Federal Motor Truck Company's salesmen or other agents, that such information shall be considered of no value and that.....fully understands that he (they) will not be entitled to receive payment of any premium for having sent in the information and does hereby waive any and all claim for such information being given to Federal Motor Truck Company.

It also being fully understood and agreeable to both parties hereto that.....shall be entitled to no premium for prospect information should Federal Motor Truck Company be unable to sell a vehicle to the prospect within a period of Thirty days from date the information is conveyed to Federal Motor Truck Company.

It is fully understood and agreed upon by both parties hereto that.....has no authority to act as agent, for, or represent the Federal Motor Truck Company in any manner whatsoever and that the purpose and sense of this agreement is only for the furnishing of prospect information to Federal Motor Truck Company for any acceptable information rendered.

It is further understood and fully agreed upon by both parties, that this memo agreement may be terminated at any time by either party hereto, giving Twenty-four hours notice in writing to the other.

Federal Motor Truck Company will mail premium check for any premium due, on the 10th of the month following the month in which sale was completed.

FEDERAL MOTOR TRUCK COMPANY (Detroit Branch)

Manager

By

Witness:

Agreement entered into between branch and garage
by which the latter undertakes to turn in prospects

Parts Distributed *with* Speed and Accuracy

White Co.'s Plan Described at Service Managers' Forum—Bus Operator Discusses Chassis Design

HOW the White Company distributes service parts to its various branches with speed and accuracy was explained by A. H. Prasse, parts service manager, at the recent National Automobile Chamber of Commerce Factory Service Managers' Forum held in Cleveland. Other speakers from the commercial car field at this meeting were O. M. Brede, supervisor of Service General Motors Truck Co., who discussed the increasing importance of service in selling motor vehicles, and Pierre V. C. See, Northern Ohio Power & Light Co., who talked on bus maintenance, discussing incidentally some of the things he thought the manufacturers might do to assist operators.

The White parts distribution plan is built around one form, reproduced herewith, which is numbered serially and filled out in triplicate by the branch originating the order. The first two copies are paper, while the third is cardboard, all tied together with carbon paper interleaved by a metal eyelet. The top copy is removed by the branch and filed awaiting the arrival of the material, while the two remaining copies still fastened together are mailed to the factory. One feature of this card of particular interest is the provision that is made for the insertion of sales of the part ordered for each of the preceding six months which makes it possible for the factory to determine whether the proper quantity is being purchased.

Sorts Tags by Parts Number

In the factory parts department, the tags are sorted by part number to facilitate posting, those requiring special interpretation being set aside for attention. The sorted tags are then routed through a master reference file and checked for part number and prices, corrections where necessary being made by crossing out the incorrect information to avoid erasure. Next the disbursement entries are made in the stock records and the stockroom location of the part ordered entered on the tag. Making the disbursement entry before removal of the stock from the bins gives a sensitive control over the stock on hand as if the supply is low a partial shipment is indicated so that the order filler will not give out the entire supply. Where a stock shortage develops, the tag is put in a part number file and the branch advised as to the probable shipment date. The production department, of course, is notified in the event of low stock or shortage.

The two copies of the tag, still fastened together, then go to the stockroom where they are sorted by branches as fast as received and made up into truck lots for the order fillers just in advance of their needs. In this way all tags on hand for any branch are filled at the same time. A cycle of branches is completed, however, before another is started in order to insure

Tags used in White's parts distribution plan. The original, at the right, is retained by the branch, the duplicate and triplicate are forwarded to the factory. These are similar except that the triplicate is on a card

equality of service. The bundles of tags given to the order fillers or pickers are sorted roughly as to stockroom location.

The pickers remove the parts from the bins, attach the tag to one piece of the item, place the items in tote pans by branches and deliver them to a two-way conveyor which delivers them to either the express or freight packing room. Express orders are packed at once whereas freight shipments are placed in accumulation bins for packing in economical lots. No orders are held for more than three days, however, and shipments go forward to 90 per cent of the branches daily or oftener.

From the accumulation bins, the packers pull the parts to the packing benches. As each item is placed in the box, the paper copy (second copy) is removed and placed on a clip board. The cardboard copy, still wired to one piece of the item or carton, is enclosed in the box as a combination identification tag and packing record. When packing is complete, the boxes move by conveyor to the shipping room along with the paper copies of the tags which, after the boxes have been weighed and stenciled with the weight, destination and bill of lading number, are forwarded to the office. A packer's check sheet guides the shipping clerk in
(Turn to page 26, please)

How to Service Truck Four-Wheel Brakes

Part III

Bendix Brakes on G. M. C. T-40 and T-50

BRAKES on the six-cylinder G.M.C. Models T-40 and T-50 trucks are of the Bendix 3-shoe self-energizing type. The service brake works on four wheels and the hand brake on the rear wheels only. The method of adjustment, the construction of parts and the arrangement of the brake operating mechanism are different on G.M.C. trucks than others employing this type of brake the principle of which was explained in the first article of this series appearing in the May issue.

Ordinarily adjustment is made at the central wing nut, 1, shown in Fig. 3 and in Fig. 5. The brake pedal should move two inches before the brakes start to apply. This and other adjustments should be made with the vehicle standing and the brakes cold.

Adjustment of the front wheel brakes will be required after considerable use. The adjusting screw is located forward of and below the front axle as indicated by the arrow in Fig. 4. Wheels should be jacked up and the adjusting screw tightened the same direction as the wheel rotates until the brake starts to drag and then backed off until the wheel turns free again. The lock nut should then be secured. Equalizing of front brakes is accomplished by adjustment of the nuts, 4, in Fig. 3, which are located inside the hood just to the rear of the radiator. These should be tightened or loosened until a slight application of the brakes gives the same drag on each front wheel. Adjustment should be loose rather than tight.

This is the third of a series of three articles concerning adjustment and maintenance of four-wheel brakes. The first, which appeared in the May issue, covered Autocar internal and G. M. C. external types, the second published in the June issue, covered Lockheed internal as used on the Reo Speedwagon Junior.

There is a corresponding adjustment on the rear wheel brakes as indicated at 5 in Fig. 3 but no adjustment is ordinarily required at this point.

Running adjustments are made in this manner until the brake operating levers at the rear, 6 in Fig. 3 and the front as indicated at 4 in Fig. 3, are in a vertical position with the brakes released. This indicates the need of complete readjustment of the brake system.

To make this adjustment jack up all four wheels and loosen wing nut, 1 in Fig. 3 to the end of the threads and loosen bolts in clamps on front brake operating shafts and the clamp bolts on rear brake levers, as shown in Fig. 3 at 8 and 6 respectively. The clamps and shafts are serrated and parts should be driven one way or the other until the serrations are released.

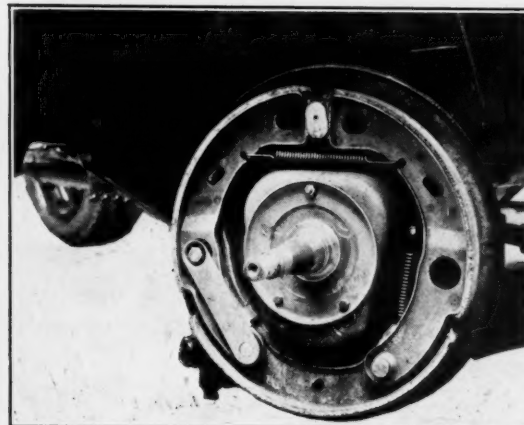
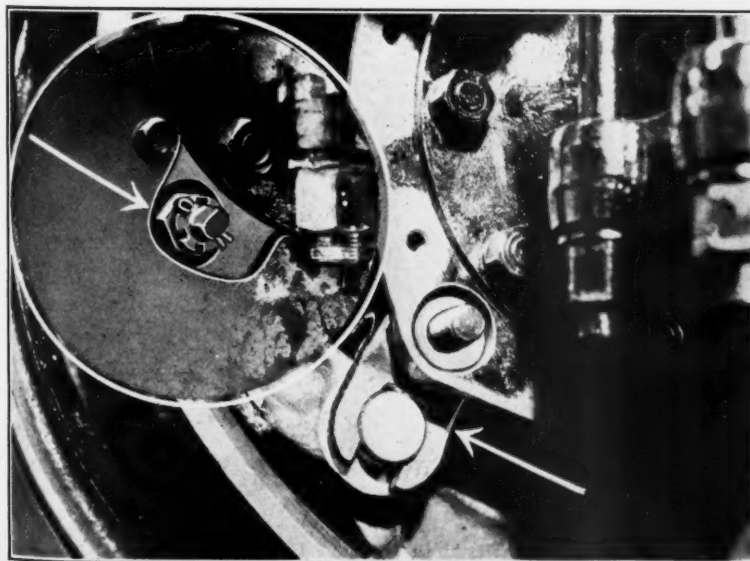


Fig. 1. At left: The take-up keeper bolt has been changed as shown in circle

Fig. 2. Above: View of front wheel brake

Rear brake operating shaft should then be turned with a pipe wrench in the direction to apply the brakes until the brakes start to engage and then released until the wheel turns freely again. The lever should be engaged on the serrations again and should make an angle of approximately 60 degrees to the rear of the vertical line of the brake shaft. Both levers will be placed an equal number of serrations back of original position if this operation has been done correctly. The operation should be repeated on the front brakes by placing the couplings back on the shaft serrations so that the levers make an angle of about 60 degrees forward of the vertical center line of the shafts. The adjustment of the front wheel brakes as explained in preceding paragraphs should be repeated.

The brakes should then be tested for equalization by applying the foot brake lightly and testing each wheel in turn. There should be the same amount of drag right and left at front and right and left at rear. Front brakes are equalized by adjustment of nuts 4, in Fig. 3 and the rear brakes by adjustment of the yokes 5 in the same illustration.

Complete readjustment is required in all cases when new linings have been applied. The throw of the brake cams is sufficient to wear out the lining which is $\frac{1}{4}$ in. thick, without loss of leverage, and levers and couplings can be reset as directed above until the lining is worn to such an extent that replacement is necessary.

The hand brakes applies the rear brake shoes through the same rods as the pedal and equalization if correct for service application will be correct for hand brake. The only adjustment necessary on the hand brake is that of the yoke indicated at 11 in Fig. 3. The point to watch is that the hand brake when released does not keep the rear wheel brakes partly on. If the adjustment is made so that the lever moves two inches before applying the brakes there will be no trouble in this respect.

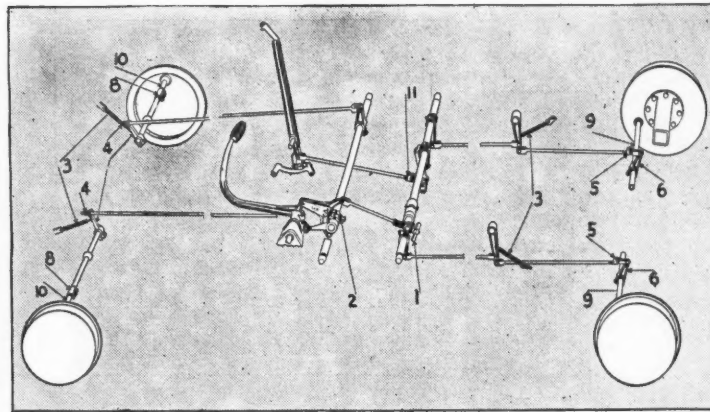


Fig. 3. General arrangement of G. M. C. brake system. Note primary adjustment 1, and equalizing adjustments at 4 and 5

original bolts had a plain threaded end as shown in the center of the illustration and the new style is longer and has a flattened portion to fit a wrench as can be seen in the circle insert. The takeup keeper, which is the forked member, is fastened to the keeper bolt by knurling under the head of the bolt. In case any adjustment of the keeper is required it can be swung a little to one side or the other by loosening the lock nut on the keeper bolt and turning it with a wrench. The correct position can be achieved, by loosening the lock nut and applying the brakes hard and tightening the locknut fully with the brakes still applied.

A double yoke with three holes in one of which is a clevis pin is located under the floor boards just forward of the brake cross shaft. This is not a means of adjusting the brakes and should not be changed when brakes are adjusted or relined.

A check-up of the brake system should be made during the first 500 miles of operation after linings and other parts have worn in somewhat. If the brakes are adjusted and equalized as required at this time no further attention need be given the brakes for some time.

Equal braking effort depends upon equal friction between lining and drums, and the same lining should be used on all four brakes of the same vehicle.

The cooperation of the factory service department and of Mr. M. B. Reeves of the Philadelphia branch and Mr. Henry Hickman factory service representative is acknowledged in the preparation of this article.

In replacing the front brake shoes care should be taken to see that the end of the shoe is properly placed over the eccentric which is formed on the inner end of the screw shown at arrow in Fig. 4. It is necessary to spring the lower shoe down a bit to slip the shoe in place. If this is not done the front wheel will not go on all the way.

A change has been made in the design of the rear brake shoe take-up keeper bolt as shown in Fig. 1. The



Fig. 4. Front wheel adjusting screw is indicated by arrow

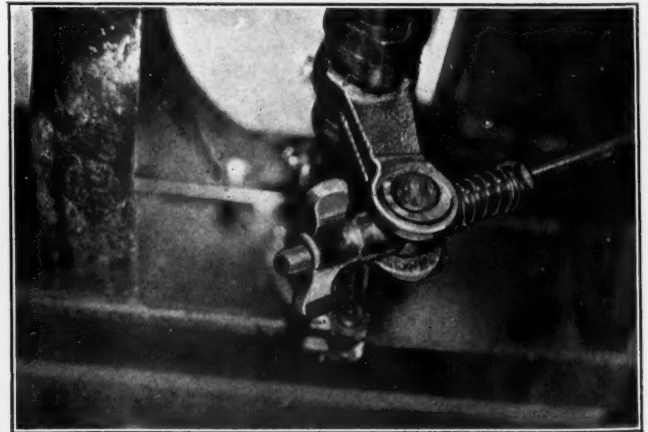


Fig. 5. Central wing nut provides running adjustment

C. C. J. Shop Ideas

THIS page is designed primarily to help service station repairmen in exacting economies in time, labor and money. Salesmen, however, can also profit by scanning over these practical hints.

The average buyer today is more conversant with the important details of truck operation and maintenance than ever before. A money-saving idea will often result in a sale.

Readers have secured many valuable suggestions from the series of ideas published. We want more useful hints and will pay \$5 for each new idea accepted. Give exact dimensions of parts to be made to enable other readers to duplicate the device.

No. 141. Electrolyte Level Tester

A heavy glass tube makes a handy device for determining level of electrolyte in storage batteries. The tube is lowered in the filler opening until it touches the plates, then the mechanic places his thumb over the end and lifts the tube out. The tube may be ruled on an inch scale or the correct level for the battery in use marked.

Keeping a tube at hand when needed is a difficulty. It may be overcome by mounting the tube on the underside of the cover over the battery space. A pair of clips such as are used for fuses are fastened to the cover. The inside surface of the clip is covered with a strip of surgeon's adhesive tape to better protect the tube.

No. 142. Clutch Assembly Puller

Ordinary pullers cannot be used on some makes of multiple disk clutches to pull the assembly from the clutch shaft. The plates are too thin to stand the pulling strain. However, a wheel puller can be easily adapted to the job. A hole is drilled in each puller arm near the end. Two bars are made of stock about 1½ in. by ¾ in. and several inches longer than the diameter of the clutch. Two holes are drilled in each bar. Clevis pins are used to assemble the puller and bars as shown in the drawing. The bars transmit the pulling strain to the end of the assembly without danger of damaging plates.

—GMC Service, Phila., Pa.

No. 143. Front End Engine Support

A section of light channel iron and two wedges may be used to advantage to support the front end of an engine while the timing gear cover is removed for work on front end drive. The truck or bus may be moved about the shop with the support in place, which cannot be done when jacks or chain hoist are employed for this purpose.

No. 144. Universal Joint Forms Wrench

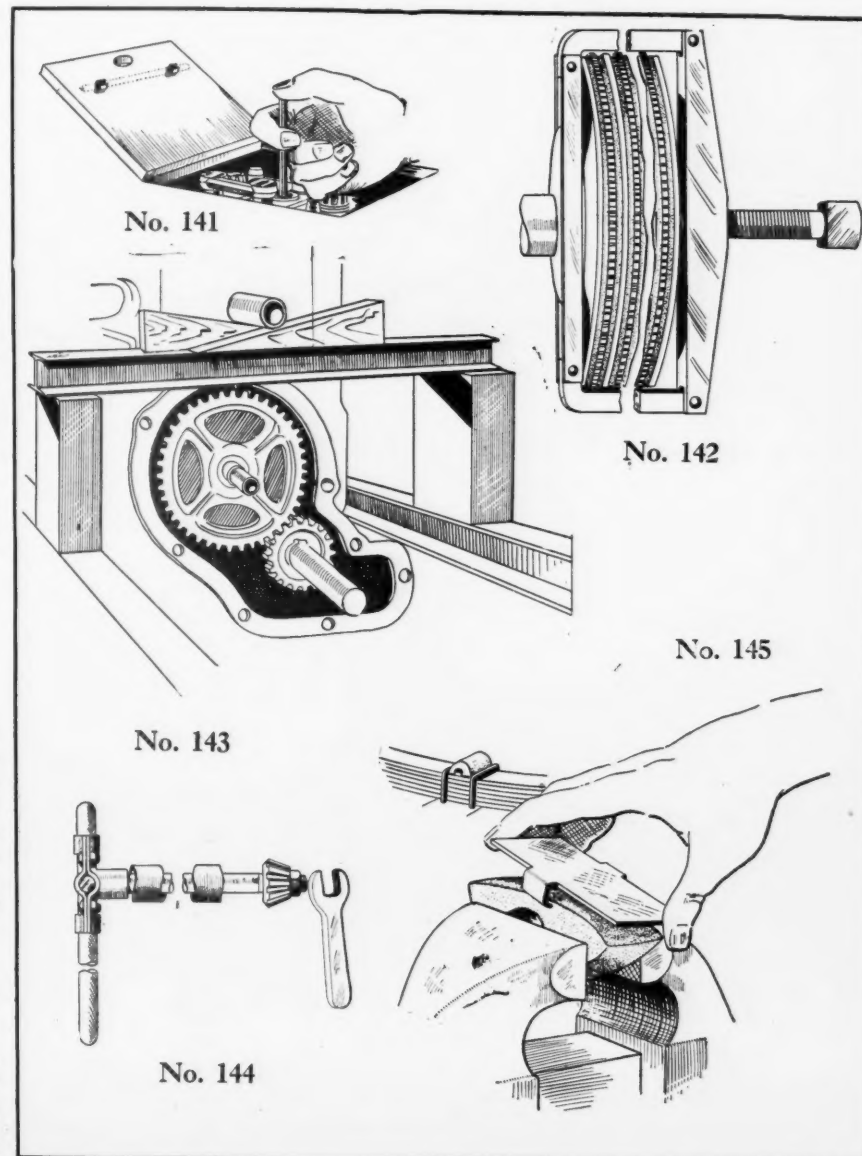
A universal joint with one yoke removed and its place taken by a bar about 24 in. long saves time when a rear axle pinion nut is to be tightened or removed. The end of the propeller

shaft is difficult to hold, in many cases. The end of the universal joint fits the forward end of the shaft. By taking the ring of the joint apart, the forward yoke can be removed and the bar substituted. The manner of using the device is shown in the drawing.—V. Keedena, Crookston, Minn.

No. 145. Attaching Spring Bumpers

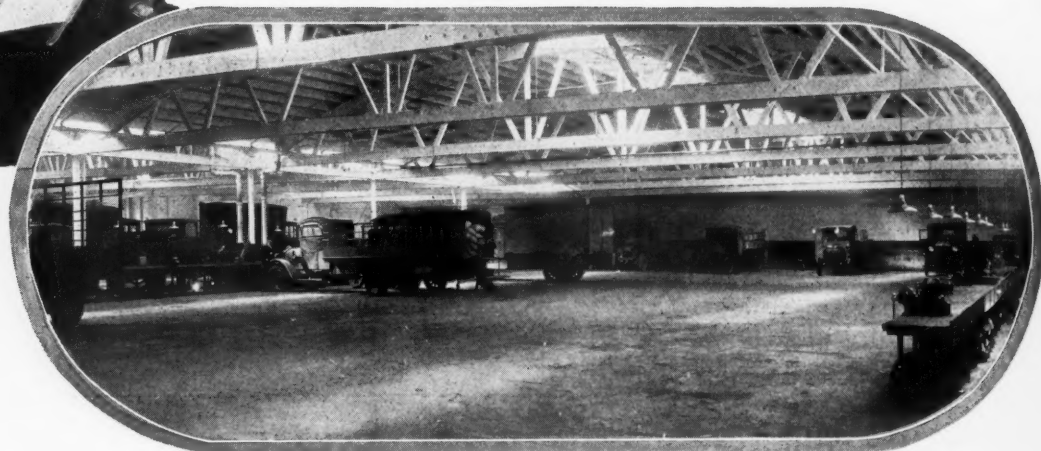
Rubber bumpers as used on front

springs are difficult to attach to the pressed steel plates which hold them. The plate has a hook on each side which retains the rubber in position. We have found that they can be attached easily by clamping the rubber in a vise and compressing until the plate can be hooked first in one side and then the other as shown in the accompanying illustration. With this method the jobs takes but a minute to complete.—H. W. C., Theo. C. Ulmer, Ind., Philadelphia, Pa.





G. R. Lott, manager, Diamond T service station, Chicago, and a view of the large and well-lighted service floor



New Maintenance for Fast

WITH a floor area of 50,000 square feet, the new Diamond-T service station in Chicago is handling the requirements of some 3500 trucks in that territory.

Approximately 65 trucks are handled at one time, with a force of 80 mechanics and helpers. In addition to these men there is a staff of about twenty persons in the offices and inspectors' department.

A notable feature of the establishment is the close contact maintained between the various departments by means of a pneumatic tube system and telephones. Pneumatic tubes convey orders from the inspectors to the credit department for O.K.; requisitions and men's time sheets from the stockroom to the office; order sheets from the foreman's shack to the pits, and every other place where there is need for the interchange of forms.

Inspectors can phone the various stock departments, the magneto repair shop, etc., and obtain immediate information as to the state of a job or the time of its release, and so inform the customer without unnecessary delay.

Between the entrance and the exit is the inspector's office with a drivers' restroom to the right of the entrance. Vehicles coming in for repair are examined here and taken over from the drivers. Before the vehicle reaches the shop the instruction sheet is in the hands of the shop foreman via the pneumatic tube.

Along one wall of the building are arranged the lubricating and engine overhaul pits. These are daylight pits, with a bench on the same level, electric lamps in the walls, plug outlets for drills, etc., and separate drainage.

Two of the pits are the full length of the chassis for lubricating purposes, while the other pits are just long enough to take care of engine operations.

Benches for general overhaul work are arranged down the center of the shop, and the trucks are lined up at

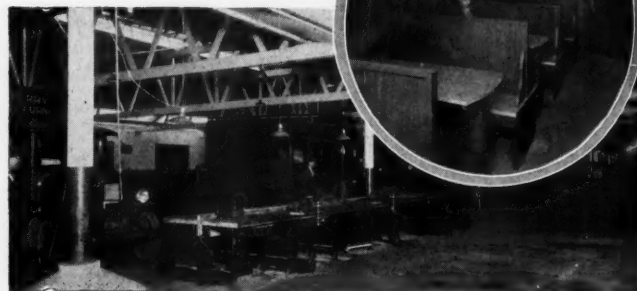
right angles thereto. At one side of the building is the collision section, where seriously damaged vehicles are handled, and along the opposite wall, near the exit is the dead storage and completed jobs.

Along the front of the building, together with the manager's office—the credit office is on the second floor—is the stockroom and parts counter. The 25-foot metal counter has a glass front for display purposes and a separate counter is used for wrapping. All entries, credits and charges are handled in the credit office above, the sales slips being sent through the tube.

Back of the parts store is the toolroom, with two openings into the shop. All oil and grease is issued on requisitions as well as the tools. The tools are stored on special display boards, so that those in use can be noted at a glance.

Separate shops are maintained for engines and transmissions. In common with the rest of the floors, these are daylight shops, and what is equally important, well ventilated. One man is constantly employed in the en-

By making each bench a complete unit speeds up minor repairs. In the circle, a room for drivers



e Building Planned t Service

*Inter-Departmental Pneumatic Tube
System and Wide Range of Time-
Saving Equipment Among
Speed Features of New
Chicago Diamond T
Service Station*



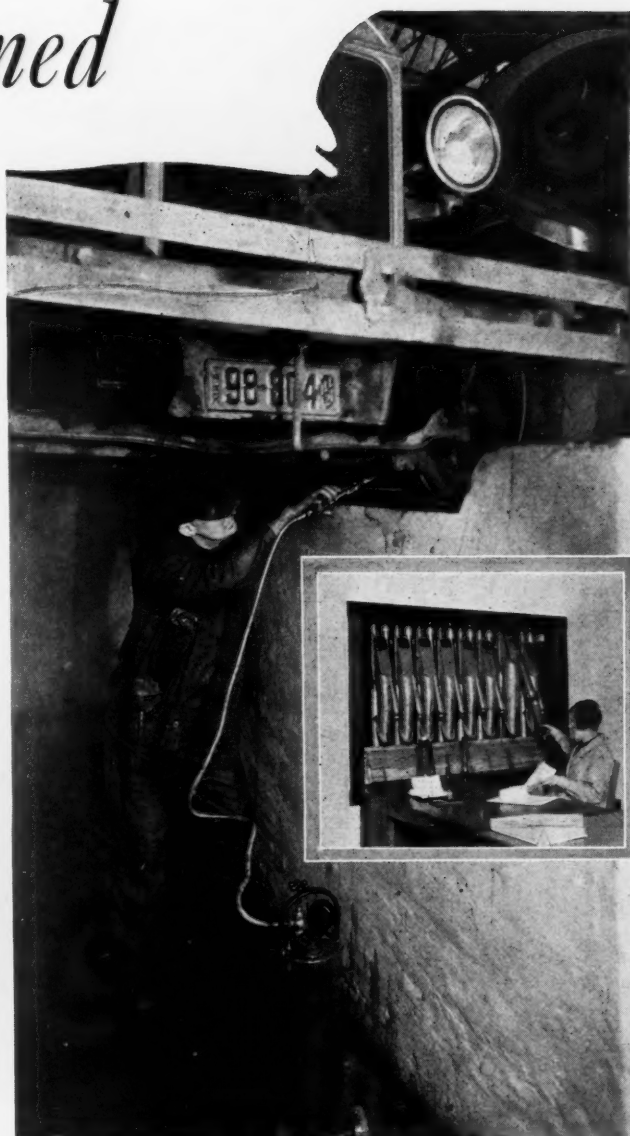
Parts are well displayed in this stockroom and it's easy to buy

gine and machine shop, overhauling and rebuilding for stock. This is made possible by the Diamond-T practice of substituting units instead of repairing damaged ones.

In the engine shop the machine tool equipment comprises, in addition to several engine stands, a small grinder, one large and one small drill presses, a shaper,



Convenient tool arrangement and a view along the well-lighted, well-ventilated and well-drained pits



Pits cut time on chassis lubrication. Insert—The central station of the pneumatic tube system

one 6-in. and one 14-in. lathe, the latter for handling brake drums, etc.

Two cabinets of special wrenches are features of the transmission shop, which is equipped with a brake shoe drill, brake riveter, clutch lining riveter, and an arbor press. Three mechanics specialize on this work.

In a small separate shop is a brazing hearth and a portable acetylene welding set that can be moved alongside the job to be worked on. With the exception of a wash, an oakite tank, and three washrooms, this completes the ground floor layout.

Heating of the building is cared for by the York heating system of blowers and heating coils. In hot weather these blowers can be used to circulate cold air. Exhaust fumes are carried off by means of suction pipes in the floors into which flexible tubes from the vehicle exhaust pipes are led.

Storage for lighter parts is provided on the second floor, along with the electrical repair shop. This is equipped with an armature growler, remagnetizer, motor for driving magnetos under test, and plug testing equipment. As with other units, repaired magnetos and generators are put into stock for sale, or replacement when a damaged unit is removed. Carburetors, incidentally, are repaired by the makers.

\$2,075⁰⁰

for 27 Automotive

Great Popularity Contest Under the Auspices of Motor World Wholesale

Opened July 1

Closes October 15

WHO is your favorite wholesale salesman? Which one of the conscientious and hard-working men who call upon you in the interest of jobber or distributor deserves recognition for his ability and popularity?

We want you to help that man win a substantial cash prize in addition to deserved national recognition.

The United States is divided into nine trading zones. Contests are being conducted simultaneously in all the zones, and the three most popular and efficient salesmen in each zone will be awarded prizes of \$100, \$50.00 and \$25.00 respectively, depending upon the number of votes credited to the three leaders in each of the zones.

First Prize \$100.00

Second Prize \$50.00

Third Prize \$25.00

In addition to the zone prizes there will be a master prize of \$500.00 to be awarded the salesman who receives the highest number of votes cast in any one zone for an individual. Hence the winner of the master prize will also win the \$100.00 zone first prize, making his total \$600.00 in cash.

This Popularity Contest will place the spot-light upon the men in the various territories who are enjoying deserved popularity at the hands of their customers—the men who retail and service cars, parts, accessories and supplies. That will be recognition worthy of mutual effort, and will confer real honor upon each of the 27 prize winners.

The nine postal, or trading zones in the United States are as follows:

NEW ENGLAND: Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut.

MIDDLE ATLANTIC: New York, New Jersey, Pennsylvania.

SOUTH ATLANTIC: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

EAST NORTH CENTRAL: Ohio, Indiana, Illinois, Michigan, Wisconsin.

EAST SOUTH CENTRAL: Kentucky, Tennessee, Alabama, Mississippi.

WEST NORTH CENTRAL: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

in Cash Prizes Wholesale Salesmen

WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas.

MOUNTAIN: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

PACIFIC: Washington, Oregon, California.

The electors will be the men who compose the retail trade—dealers, garage owners, service station proprietors, etc.

They will be requested to vote by ballot. Ballots will be printed in the regular issues of:

AUTOMOBILE TRADE JOURNAL (Monthly)

MOTOR AGE (Weekly)

COMMERCIAL CAR JOURNAL (Monthly)

CHILTON CATALOG & DIRECTORY
(Quarterly)

These are the Chilton Class Journal publications which cover the retail trade—a coverage that is unique in its completeness.

During the period which commenced with the June 30 issue of *Motor Age*, the July 1 issue of *Automobile Trade Journal*, the July 1 issue of *Chilton Catalog & Directory*, and this issue of *Commercial Car Journal*, each issue of these publications will carry a voting coupon up to and including the *Motor Age* issue of October 6, 1927.

Votes will be received and counted at the publishing offices of the Chilton Class Journal Company, Philadelphia, up to 12 o'clock noon on Saturday, October 15, 1927.

Announcement of contest winners will be made in *Motor Age*, issue of October 27; in the November 1 issue of *Automobile Trade Journal*; the November 10 issue of *Motor World Wholesale* and the November 20 issue of *Commercial Car Journal*.

Prizes will be awarded to the winners during the week of November 7 in Chicago while the A. E. A. show and convention are current.

In each of the 15 (weekly) issues of *Motor Age*, which will be published during the Popularity Contest, the coupons printed therein will represent one vote each.

The four issues of *Automobile Trade Journal* and the three issues of *Commercial Car Journal*, both

published monthly, will carry coupons good for four votes each.

Chilton Catalog & Directory, quarterly, published on July 1, and will also carry a coupon good for four votes each.

All votes will be credited to the zone in which the wholesale salesmen's firm is located.

Should two or more candidates tie for the master prize, or for first, second or third prizes in any of the nine zones, all tied contestants will be awarded prizes of equal value, to which their respective votes entitle them.

The Chilton Class Journal Company, publishers of *Motor World Wholesale*, and of the dealer publications which are carrying voting coupons of this great Popularity Contest, invites every dealer, garage owner and service station proprietor—and all identified with the retailing of automotive products—to take part in the voting.

It urges them to assist in making this nationwide contest redound to the credit of the aggressive salesmen who will be declared the winners when the ballots have been cast and counted.

Address all correspondence to Contest Editor, *Motor World Wholesale*, Chestnut and 56th Sts., Philadelphia.

—Use This Coupon—

MOTOR WORLD WHOLESALE Popularity Contest for Wholesale Automotive Salesmen

Contest Editor
Motor World Wholesale
Chestnut and 56th Sts., Philadelphia

In the wholesale automotive salesmen's popularity and efficiency contest I vote for:

Name of salesman

Name of his firm

His firm's address

Your signature

Your firm name

Address

C. C. J., July 20—This ballot is for ONE vote.

Truck Brakes Under Fire in Massachusetts

BOSTON motor truck dealers are very much concerned over a letter recently issued to the press in which there is an implied threat against truck manufacturers unless they change the brake equipment on certain models. As a result Day Baker, secretary of the Motor Truck Association of Massachusetts, went to New York to confer with executives of the N. A. C. C. on the subject. In his statement to the newspapers he says:

"After a campaign of enforcement on brakes for a month and a half, the Registrar of Motor Vehicles has discovered that a great deal of the trouble with brakes on trucks is that the braking system is not properly constructed so that the vehicles may be stopped when loaded, and particularly when over-loaded. As a result he has written a letter to all truck manufacturers in the United States telling them what they may expect if they do not make improvements in the braking system on trucks: The letter to manufacturers says in part:

"Our most recent enforcement work in Massachusetts again emphasizes the necessity for a decided improvement in braking equipment on trucks. The campaign which is now being conducted in metropolitan Boston shows the following total results on trucks to date:

	No.	P.C.
Very bad (registrations immediately revoked)	404	7.1
Defective (owners required to repair and report)	2340	41.0
Passable	2973	51.9
Totals	5717	100.0

"Braking equipment on trucks is classed as very bad, for immediate revocation, if the distance to stop from 20 miles an hour is 80 feet or more with the service brake, coupled with 100 feet or more on the emergency brake. (These limits are 60 feet and 80, respectively, on trucks of less than two-ton capacity.)

"Truck brakes are classified as passable if the vehicle can be stopped in 45 feet or less with the service brake from a speed of 20 miles an hour, or from the maximum governed speed, and 80 feet with the emergency brake, from a speed of 20 miles an hour.

"Brakes in such condition that they come between these two classifications are classed as bad, and the owner is required to have the defective equipment corrected, and report with the vehicle to one of our offices for inspection.

"Good braking equipment is essential for safe operation, but it would seem that the truck manufacturers have been slow to realize the necessity for making an improvement in this direction. Trucks are operated quite generally in thickly settled sections, where children and other pedestrians are so often killed in motor vehicle accidents, and defective brakes on trucks are re-

sponsible for many of these fatalities.

"The stopping distance limitations above referred to have now been reduced somewhat from those of two or three years ago, and it is our intention to reduce them still further in the near future. This may have the effect of restricting the operation of some makes of trucks. If that situation does occur, the manufacturer will have no one but himself to blame, because he has had not only this notice, but also one sent out by this department on Sept. 9, 1925."

Garages Sell Used Trucks

(Continued from page 13)

prospect in referring to the truck, and the Federal men know which one it is.

"The point is," Mr. Craig explained, "nearly all used truck prospects have something to trade and of course they want more than it is worth. We find out what they have to trade first, then we are prepared to dicker with them. If they have nothing at all to trade, we can come down quite a bit on most of these prices; if they have a good job to trade and we can get a reasonable figure, we may be able to shade these published prices a little; but if they have a piece of junk that is worthless and want to hold us up on it, then these are our prices, and we may even have to show them a cheaper truck than the one they inquire about. We had a case just yesterday of a prospect who had an old junk pile that wasn't worth over \$25 and he wanted \$1,500 for it. Another was interested in a \$100 Ford, wanted us to take a \$2 deposit on it, then take a used car in trade. Such prospects think they are shrewd and we have to be a little shrewder than they."

When a garageman signs a contract to furnish prospects, a card is made out for him and thereafter his record is kept on this card for convenience. Once a month, a salesman calls on him and talks matters over with him to keep him interested and to give him any help needed, and a record of such calls is kept on the back of his card. If, after a reasonable length of time, a garageman has turned in no prospects and appears to be making no effort to do so, the agreement with him may be terminated on 24 hours' written notice.

This plan has been used by some individual salesmen elsewhere, Mr. Craig said, but has been none too successful because the garagemen sometimes found it difficult to collect their commissions. The plan here outlined is backed by the factory and there is, of course, no question about the payment. The plan has been in operation several months and is said to be working out.

One other feature of this used truck department contributes materially to its success and that is the method of re-

munerating salesmen. All used truck salesmen are paid a salary of \$200 a month, \$25 a month for operating their cars, and a commission of 3 per cent on their sales, after trade-ins are deducted. "The salary is enough to keep the wolf away and it relieves the salesman's mind of the worry and uncertainty that handicap so many commission salesmen," Mr. Craig pointed out.

The Second Half Looks Good

(Continued from page 11)

ment is a trifle more than of seasonal proportions, but even so the industry is continuing at a satisfactory rate . . .

"The textile industry as a whole is now in the best position of several years, and the cotton branch especially has been enjoying active business. The sustained heavy volume of building contracts let in May indicates that construction for 1927, while it may fall somewhat short of that in 1926, will compare favorably with other years of high activity.

"The crop outlook is mixed and is, in fact, somewhat less favorable than a month ago." This reaction is due to a considerable extent by unfavorable weather. Continuing the bank says: "The effect of adverse weather to date has been to increase the agricultural hazard, but of course the final outcome will be determined later on. The prices of many agricultural products have advanced sharply in response to this increased uncertainty."

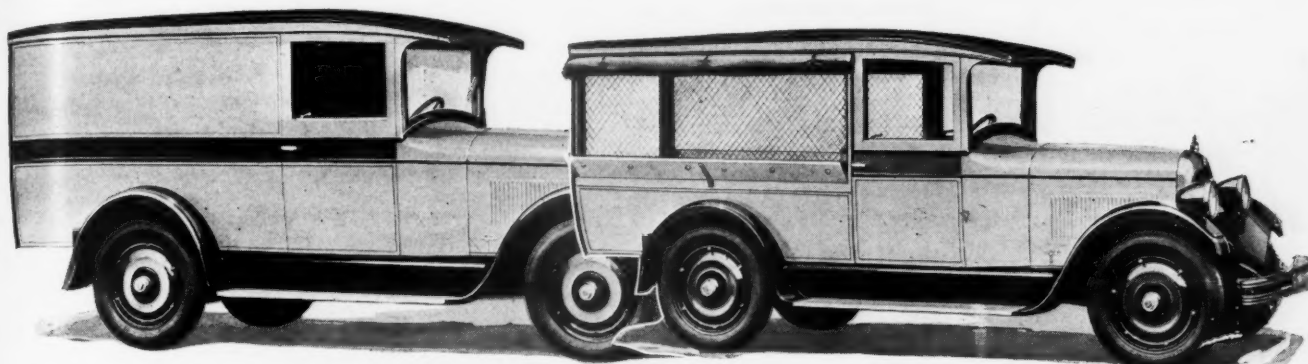
In similar vein, the Cleveland Trust Co. says: "All in all the current developments of business continue to be those of large volumes of production, transportation, and trade, stability of conditions, and keenness of competition. There is little unemployment, but no competition for labor. Wages are high and wage disputes few. The railroads continue to carry great amounts of freight, and to do it with marked efficiency. It seems likely that substantially these same conditions will maintain for some months to come."

Other similar views of able economic observers might be quoted in large number. They indicate that the best opinion is that business enters the second half year with every reason for confidence that it will enjoy a satisfactory volume on which a fair profit will be earned. Naturally truck business will keep in step.

Profits on truck sales will depend to a large extent on the effectiveness of the control applied to the credit and used truck situations. These continue to be the weak spots in the truck business but the records of the half year just ended indicate that they are constantly being strengthened.

The second half looks good for those who sell truck transportation.

The Month's New Truck Models



Views of the panel and express type bodies of the new 3/4-ton Studebaker, 113-in. wheelbase chassis, powered by six-cylinder engines and equipped with four-wheel brakes

Studebaker

TWO new 3/4-ton delivery units, mounted on a 113-in. wheelbase chassis, powered by a six-cylinder Studebaker engine and equipped with four-wheel brakes, have just been placed on the market by the Studebaker Corporation of America. They are offered in express and panel type bodies at the same price, \$1,195 f.o.b. factory.

The 3 3/8 x 4 1/2 in. L-head engine is mounted in unit with a single-plate clutch and a three-speed transmission with reverse. It develops its full horsepower at 2200 r.p.m. and has an S.A.E. rating of 27.3 hp. Connecting rods are forged steel and bearings cast babbitt. The crankshaft, supported by four bronze-backed bearings, is drop-forged from steel and machined on all surfaces. The camshaft is also carried on four bearings. The valves are operated by a roller type of bell crank.

Combined in a compact unit, the oil pump, water pump, generator, relay coil and distributor, are mounted on a single base at the right side of the engine. Force feed lubrication to all the bearings is supplied by a gear-driven pump. Pressure is indicated by a gage mounted on the instrument board. Chassis lubrication is by high pressure.

A one-inch specially designed plain tube carburetor fed by vacuum from a 14-gal. tank is used. The intake manifold, with hot spot, is doubly divided to assure uniform mixture in each cylinder. Current of ignition is supplied by generator and battery. The cooling system includes a centrifugal pump, tubular type radiator and 17-in. fan. The starting switch is conveniently located on the toe-board.

Power is carried back from the transmission by a 1 3/4-in. tubular propeller shaft equipped with two universals to a semi-floating, spiral gear type rear axle of Studebaker design. Load is carried on taper roller bearings at wheel hubs and differential. Drive is Hotchkiss, the torque being taken through large semi-elliptic springs. The rear ends of both front and rear springs are carried on steel links. All spring eyes are bronze bushed.

The four-wheel brakes are of the mechanical type, internals on the front wheel expanding on 14 5/8 x 2 in. drums and externals on the rear contracting on 14 5/16 x 2 1/4 in. drums. A propeller shaft parking brake is also provided. The steering gear is of the worm and worm wheel type specially designed for the 33 x 6 in. balloon tires used on this model. Reinforced by six cross-members, the pressed steel frame is narrow at the front to allow a short turning radius. The side members are 6 in. deep with 1 7/8 in. flange. Wheels are steel disk.

Standard equipment includes automatic windshield, rear-vision mirror, speedometer, hydrostatic gasoline gage, engine heat indicator, oil pressure gage, ammeter and front bumper.

The panel body is designed with a taper roof line to give greater height

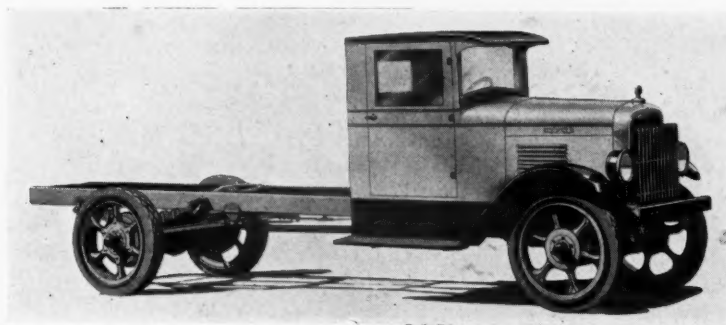
at a point just back of the driver. Narrow wheel housings give extra body width. The inside dimensions are: Length from driver's seat to rear doors, 77 in.; width, 54 in.; headroom, 51 1/2 in.; and cubic feet of loading space, 123.9; the floor level is 30 in. above the ground. It is constructed of hardwood, ironed and bolted for strength. The sheet steel panels protected by 2 1/2-in. slats on the inside are turned at the top to give an unbroken surface. The rear door opening is 49 in. wide and 44 3/4 in. high. Both doors are fitted with windows.

The express body has the same inside dimensions as the panel body, but a drop-end tail-gate, which fits flush with the body sides, may be carried and the removable side screens give much added room for packing. The 14-in. steel covered side panels are topped with 8-in. flare boards. Screen trays may be used for fragile packages. The roof is covered with coach deck material, protected by insulated slats. Celluloid fitted roll curtains are provided.

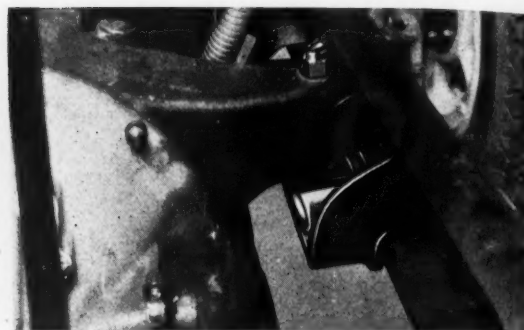
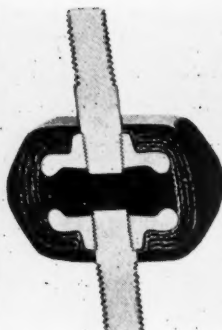
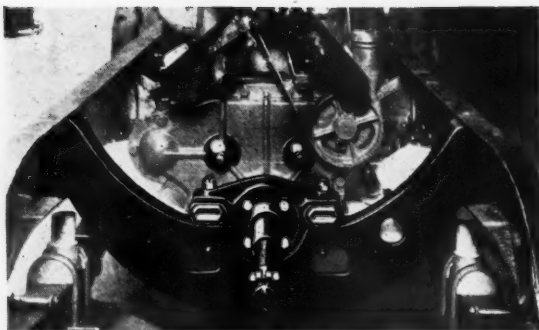
Indiana

THE new two-ton Indiana, designated as model 115, recently announced by the Indiana Truck Corp., Marion, Ind.,

is designed for heavy duty service requiring reserve power and speed. It is furnished in three wheelbase sizes, namely: standard, 150 in.; long, 168 in.; and short, 132 in. With a chassis weight of 4585 lb. and body allowance of 1050 lb., the maximum allowable payload is specified at 5050 lb. On the standard wheelbase model a loading space of 10 ft. 6 in. from back of the driver's seat is provided. Length from



Model 115, two-ton Indiana heavy-duty speed truck. It is furnished in three wheelbases



Showing where and how the engines in Diamond T chassis are now being cushioned in rubber. Note the live rubber composition between the studs in the cross-section view of the unit. At no point in the engine mounting is there contact of metal to metal. The left view shows front engine mounting and the right the rear engine leg mounting

seat to center of rear axle is 6 ft. 3 in.; width of frame is 34 in.

The four-cylinder engine is L-head type, cylinders and crankcase cast in block and with detachable head. It is of 4 in. bore and 5 in. stroke and suspended at three points. The oiling system is force feed and includes a gear pump and oil filtrator. The cooling systems consists of a centrifugal pump, 18-in. fan and fin and tube type radiator with removable core and aluminum shell. Carburetion is aided by hot spot manifolding and the 1 1/4 in. plain tube carburetor is fed by gravity from a 16-gal. tank located in the cowl. Ignition is by battery with distributor and coil.

The transmission line consists of a dry plate clutch, four speed transmission with a low gear reduction of 5.35 to 1, one-piece tubular propeller shaft equipped with two metal universal joints and a semi-floating worm-driven rear axle providing 6.5 to 1 reduction.

Both service and emergency brakes are of the internal type operating on 16-in. rear-wheel drums. The steering gear is of the cam and lever type.

Spoke type metal wheels are used in front and rear equipped with solid tires, 34 x 4 in. front; 34 x 7 in. rear. Pneumatics may be used. Speed with solid tires is 25 m.p.h.; with pneumatics, 30 m.p.h.

Equipment includes motor, crown front fenders, running boards with splash aprons, metal radiator guard, wood and metal bumpers, electric lighting and starting equipment, oil pressure gage, dash light, drum type head lights, air cleaner, oil filter and speedometer. The de luxe cab, which is extra equipment, has full length doors, with sliding glass windows, operated by crank, and a one-piece windshield.



A deeper frame, larger springs, new brake hook-up and special equipment feature the improved Selden Roadmaster model 47

Selden

THE Roadmaster model 47 is the first of the line of Selden trucks to embody the new improvements worked out by the Selden engineers.

These changes include a deeper frame, 7 in., larger castings, shackles and brackets and heavier springs. Air cleaners and oil filters are also standard equipment on the new model.

An entirely new service brake hook-up, which brings all four shoes into operation through the pedal with the aid of B. K. Vacuum Booster brake, is another feature. In addition a propel-

ler shaft brake is furnished if desired, which consists of a steel disk located back of the center bearing.

All instruments including dash type motometer, gasoline gage, oil pressure gage, speedometer and ammeter are grouped in center panel under glass with concealed lighting. Ignition and lighting switch are located on the steering column. Automatic windshield wiper, rear view mirror, dual rear pneumatic tires and Ryan Ilco flat lights are part of the regular equipment.

The de luxe cab is another feature with driver comfort and convenience, the main considerations in construction. The remote control type door opener and window regulator are of the latest bus design. Narrower corner posts permit clear driving vision.

I. H. C.

TWO trucks with double reduction gear drive in which herringbone gears are used for final reduction are being manufactured by the International Harvester Co., Chicago, Ill. The new models designated as 54 and 74 are similar in design and are rated at 2 1/2 tons and 3 1/2 tons respectively. These ratings correspond with models 54-C and 74-C which have chain drive.

The engine in both models is a four-cylinder 4 1/4 by 5 in. with removable cylinder sleeves and ball bearing crankshaft. Transmission gives four speeds forward. Gear reduction on model 54 is 54 to 1 on first and 9.1 to 1 in high while the corresponding ratios for model 74 are 62 to 1 and 10.45 to 1.

Primary reduction in the rear axle is by means of spiral bevel gears and final drive by herringbone gears. The bevel pinion and bear-



Slip-on type of commercial body for Pontiac coupe or roadster offered by the Oakland Motor Car Co. Both express and panel type bodies are offered and mounted by removing rear deck cover

ings are adjusted from the front by using a spanner on the forward pinion bearing cage and the bevel gear is adjusted in like manner by a cage on the right side of the countershaft. The herringbone gears adjust themselves to proper running position if the differential carrier caps are loosened slightly for that purpose.

Service brakes are internal type 5 in. wide on the rear wheels on both models those on the 54 are 17 in. in diameter and on the 74 20 in. in diameter. A contracting propeller shaft emergency brake is used on both models. Either solid or pneumatic tires may be had on either truck.

Federal

THREE new six-cylinder models, a one-ton bevel gear, F-6; a two-ton worm drive, T-6W, and two-ton bevel gear drive, T-6B, have been added to the line of the Federal Motor Truck Company.

Featuring the design of all three models is an interchangeability of engines, and either a Continental six-cylinder or Waukesha four-cylinder can be obtained. To make interchangeability complete the Continental 30L on the one-ton, and the 12C on the two-ton models have been redesigned. Three-point suspension is used instead of the usual four.

Wheelbase of the Scout Six, one-ton, is 124 in., including a loading space of 91 in., back of the seat. A 136 in. wheelbase chassis is also furnished. The chassis itself follows closely on the design of the Federal four-cylinder model of the same capacity, and includes Borg & Beck single-plate dry clutch, three-speed unit transmission, built by Federal, Cleveland Universal joints, Timken bevel drive rear-axle,

Fast duty, 200-in. wheelbase, Grammm highway freighter, model 864-T. It is mounted on 35 x 7 in. pneumatic tires, dual in rear and capable of 40 m.p.h. The engine is an 80 hp. Lycoming



and metal spoked, and the semi-elliptics with Hotchkiss drive.

Four main bearings support the 2½ in. crankshaft of the one-ton model, L-head engine, which has a bore and stroke of 2½ by 4¼ in., giving it a piston displacement of 185 cu. in. and rated horsepower of 19.85. Dynamometer tests show this engine capable of developing 44.5 hp. at 2800 r.p.m. Lubrication is by pressure feed. Cooling is by means of a centrifugal pump. Additional features are the supplying as standard equipment of oil strainer, gasoline filter and air cleaner. Maximum speed of this model is said to be in the neighborhood of 50 m.p.h. Body allowance is 750 lb.

Standard wheelbase of the two-ton models, which differ mainly in the type of rear axle drive used, is 143 in., which gives a loading space of 119 in. back of the cab. Special wheelbases of 155, 168 and 180 in. are also available, while a tractor edition with a 132 in. wheelbase is also offered.

The six-cylinder engine on the two-ton models is also of the L-head type. It has a bore and stroke of 3¼ by 4½ in., giving it a piston displacement of 230.2 cu. in., NACC rating of 25.35 hp., and 62 actual horsepower at 2700 r.p.m. A seven-bearing 2½ in. crankshaft features this engine. Pressure oil feed.

Differing from the one-ton model, the

A Borg & Beck 12-in. single-plate clutch is used on both two-ton models. Both types of rear axles are of Timken manufacture. The worm drive axle has a tread of 60 in., and road clearance of 10½ in., while the spiral bevel gear model has a tread of 57 in. and a road clearance of 9½ in.

Front axles of both models are I-beam in cross-section, manufactured by Federal, and have a tread of 60 in. With the worm drive axle an emergency brake is mounted on the worm housing. Service brakes with this type axle are of the internal type mounted on the rear wheels.

With the bevel gear axle both sets of brakes are mounted side by side on the rear wheels. These are also of the internal expanding type.

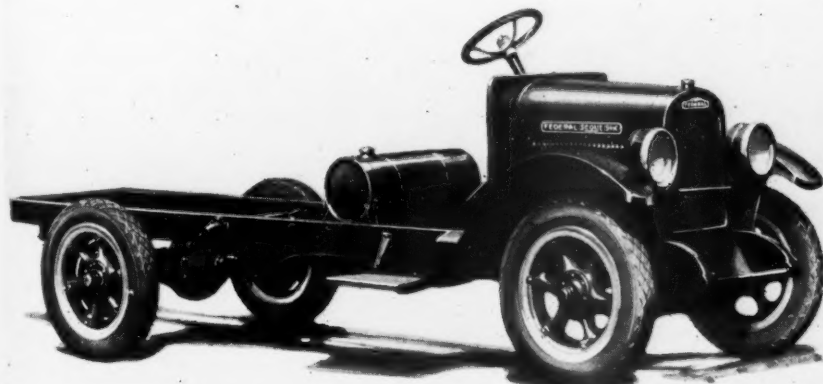
As on the one-ton model a Gemmer worm and sector steering gear is used; chassis lubrication is by Zerk pressure gun system; Delco-Remy electrical units are supplied and a 15-gallon gasoline tank is mounted on the chassis under the seat with vacuum feed to engine. The frame of the two-ton model is six in. deep as against 5 in. for the one-ton job. 3/16 and ¼ in. stock respectively is used for the one and two-ton frames.

In addition to the usual equipment, oil filter, gas strainer, and air cleaner are furnished on the two-ton models also. Solid tires are furnished with the worm drive axle model. These are 34 by 4 in. standard at the front, and 34 by 7 in. at the rear wheels. Optional oversize solids, as well as pneumatics are furnished on this model at extra cost. Pneumatic tires are standard equipment on the bevel gear two-ton model. These are 32 by 6 in. front, and 34 by 7 in. rear, with oversize pneumatics at extra cost, the latter being supplied with the dual rear disk wheels. Cast steel spoke wheels front and rear form the standard equipment. Springs on the two-ton models are of the semi-elliptic type, 40 x 2 in. front, and 52 x 3 in. rear. Radius rods are used on both two-ton models, these being fitted with ball and socket joints both front and rear.

Body allowance on the two-ton models is 900 lb. in either case. Chassis weights of the various models are as follows:

One-ton	2500 lb.
Two-ton, worm drive ...	4200 lb.
Two-ton, bevel drive ...	4000 lb.

Standard gear ratios are 4 5/9 to one on the one-ton and 6.0 to one on both two-ton axles.



New two-ton bevel gear drive Federal, model T-6B. It is of the four-speed type

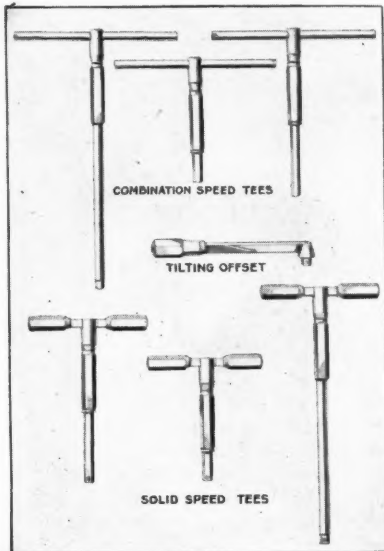
internal expanding side by side service and emergency brakes on the rear wheels, 30 x 5 in. pneumatic tires, Gemmer steering gear, Zerk chassis lubrication, Delco-Remy electrical units and Zenith double venturi carburetor. Front axle is of the I-beam type built by Federal, wheels are 20 in. in diameter

transmission is mounted amidships. It is of the four-speed type, and built by Federal, with annular ball bearings and three-point support. The front propeller shaft is fitted with a Snead fabric universal joint, while the rear driveshaft has Cleveland universals of the metal type.

Husky Combination Speed Tees

Husky Wrench Co., Milwaukee, Wis.

THE three sizes of combination speed tees have 10 in. sliding bars and swivel grips. Other new units include three sizes of speed tees with solid hexagon handles and swivel grips and an entirely new type



of wrench handle known as the Husky Tilting Offset. This handle gives a compact offset with a handle that can be tilted under any angle to clear obstruction while working. New sockets include specials for wing nuts, Alemite fittings and 25 sizes of sockets and drain plug adaptors.

Manley Universal Lifter

Manley Mfg. Co., York, Pa.

A FEATURE of this lifter is that the raising pad lowers to six inches from the floor making it possible to lift from the bottom. Either short or long bases may be used with the lift and when the long base is used an extension arm may be added to convert the lifter into a portable floor crane. The short base is equipped with two wheels and two ball bearing casters. The long base has four ball bearing casters. Price of the lifter on short base is \$85, on long base with attachments, \$108.50, and with both bases and attachments, \$115.

B. B. Bros. Hand Hoist

Beebe Bros., Seattle, Wash.

AN all-steel hand hoist of the compound geared, two-speed type is being manufactured by the above company. The hoist has a positive cam action internal brake



and a spring operated safety dog equipped with positive lock-out lug. The internal gear and extended drum shafts are made as a part of the drum and the external gear, with machined internal brake drum, together with driveshaft and internal pinions are also made of one piece of steel.

The cable drum has a capacity of 160 ft. of $\frac{5}{8}$ steel cable. Special attachment plates are provided for mounting the hoist on a truck. Price of the hoist is \$75 on the Pacific Coast, \$80 in Chicago and Central States and \$80 in Atlantic Coast States, all prices being f. o. b. warehouses at Seattle, Chicago, Brooklyn or New Orleans.

Airbestos Brake Lining

Charles D. Schmidt Corp., New York City

AIRBESTOS is constructed so as to form air ducts on the brake band side of the lining with full braking contact on the other side. The ducts consist of a series of little air channels introduced crosswise between the brake band and the lining itself. This construction permits air circulation and reduces the contact of the lining to the band, which in turn is claimed to prevent overheating and expanding of the bands. The cushioning characteristic claimed for this construction is also stated to eliminate squeaking.

This lining is made of asbestos interwoven with wires and impregnated with a compound designed to make it water, oil and acid proof.

Wallace Electric Handsaw

J. D. Wallace & Co., Chicago

THE above company has announced a new electric handsaw with a universal type of motor which connects direct to the saw spindle. The design is such that it cannot be overloaded by putting in a



larger blade than the power unit can carry. A feature of the new model is a guard which covers the blade at all points. The safety guard is released quickly by means of a trigger in the grip when being used, which falls back automatically when the saw is removed from the work. The blade is covered at all points above the work when the machine is in use. An indicator in front makes it possible to follow a line.

By means of a depth gage the saw can be set to cut to any predetermined depth. A standard 8-in. round-hole blade is used.

Black & Decker Hole Saw

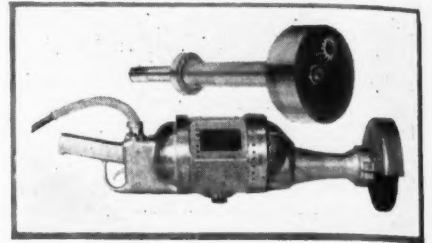
Black & Decker Mfg. Co., Towson, Md.

THIS saw is used for cutting holes from $\frac{3}{4}$ in. to $3\frac{1}{2}$ in. diameter. A $\frac{1}{4}$ in. twist drill is used as a guide for the saw. The hole saw may be used with Black & Decker portable electric drills of $\frac{1}{2}$ in. and larger sizes. A complete set of saws for automotive service consists of five saws and two mandrels and sells for \$7.50.

B & D Grinder Has New Construction

Black & Decker Mfg. Co., Towson, Md.

ONE of the latest features embodied in Black & Decker 5-in. and 6-in. portable electric grinders is an internal gear drive which greatly reduces the distance of gear centers and in turn reduces the diameter of the gear housing. Longer life and smoother operation is also claimed for



this gear design. The wheel spindle is also supported at each end by taper roller bearings to withstand the constant side thrust to which a grinder spindle is subjected. Another feature of this grinder is the new location of air intake holes, which was adopted to prevent sharp particles from being drawn in the motor windings.

Parts Distributed With Speed and Accuracy

(Continued from page 14)

making out the bill of lading. A copy of this sheet containing the tag numbers is filed with the bill of lading for reference in case of loss or damage. This packing procedure applies to all parts except that those of a heavy or bulky nature are not accumulated in bins but are packed from special trucks delivering them to the packing room.

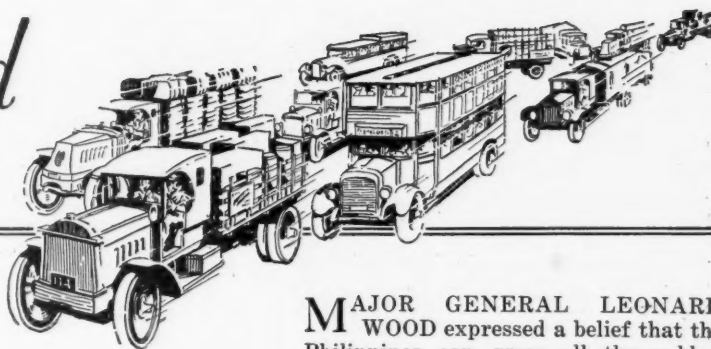
When the paper copies of the tags reach the office, they are listed on billing forms which in turn are forwarded to the accounting department for crediting the factory inventory and charging that of the branch. The tag copy then is filed by number, a separate file being kept for each branch.

At the branch the shipment when received is checked against the bill of lading. While the box is being opened, the branch's file of original tag copies is obtained and, as the items are removed, the cardboard copies are detached and compared with the original. The checked original copies then go to the branch stock records for posting of the receipts. The cardboard copy, still attached to the item, serves to locate the part in the proper bin as the bin location was put on it originally.

In connection with the system, the White Co. is using with success a bonus plan for the men employed in the factory stockroom through which they earn in proportion to their production.

Among the things which bus manufacturers might do for operators according to Mr. See, are to provide more complete and better illustrated catalogs, improve braking systems, set up practical specifications to be used in purchasing lubricating oil, improve fuel tank installations and make it easier to remove engines to facilitate installation of a spare unit.

Have You Heard That ~



TRAFFIC experts from all over the country recently met in Detroit for the organization of a national committee on municipal traffic codes. Subcommittees were appointed to investigate the following subjects: Motor vehicle movement and regulation, pedestrian facilities; traffic signs, signals and markings; parking terminals and garages; public motor vehicles, steel cars, and emergency vehicles; traffic organization and enforcement; railway grade crossings; street loading facilities, and obstruction for repairs. According to William E. Metzger, chairman, all reports will be turned in some time during fall.

The Yellow Sleeve Valve Engine Works established in East Moline in 1922, will be moved to Pontiac, Jan. 1, 1928, according to Paul W. Seiler, president of Yellow Truck & Coach Mfg. Co. Louis E. Ruthenburg, general manager, has been appointed assistant to the president, and will be in charge of the plant being erected at Pontiac.

W. C. Parker, manager of the Speed Wagon and Bus Division of the Reo Motor Car Co., has been appointed a member of the Truck Committee of the National Automobile Chamber of Commerce.

BETWEEN January 1st and June 15th this year, 471 repossessions were reported by 18 members to the credit bureau of the Motor Truck Association of Illinois.

The reports mean that the operators

of these trucks who could not meet their payments will be unable to victimize any other member of the association.

Another function of the credit bureau is to control the credits on the sale of parts and service. The association members have agreed to sell all parts and service on a 30-day basis only, and to report to the bureau any accounts outstanding over 60 days, or otherwise troublesome.

19.9 Per Cent of Highway Users Come From Distant Points

THE tremendous economic and social significance of good roads upon a community is reflected in the results of a traffic survey conducted by Tennessee last summer which showed that 27.7 per cent of the vehicles traveling over state and state-aid roads are from distant points. The survey was based on reports from 41 scattered stations. Results: 72.3 per cent from local or immediately adjacent counties; 19.9 per cent from distant counties, and 7.8 per cent from other states.

MAJOR GENERAL LEONARD WOOD expressed a belief that the Philippines can grow all the rubber needed by the automotive industry in the United States in an interview with President Coolidge. He said, "It is essential, however, to interest American capital, capable of carrying on for four or five years until the plantations start producing. I personally favor the granting of leases up to 50,000 acres for a period of 25 years."

E. A. Manning has been appointed branch manager of the Pittsburgh branch of the Diamond T Motor Car Co. with Ray Burns as wholesale sales manager of the Pittsburgh territory. Frank Hollearn, his predecessor, will cover the eastern territory as wholesale sales manager with Philadelphia as headquarters.

Republic Truck Sales Company has made Portland, Ore., its headquarters for the states of Oregon, Washington, Idaho, Utah, Wyoming, Montana and the province of British Columbia. Thomas M. House has been named northwestern manager.

J. WALTER DRAKE will retire early in the fall as Assistant Secretary of Commerce with high tributes paid by Secretary Hoover. Mr. Drake previous to his governmental connection in 1923 was chairman of the board of the Hupp Motor Car Co. He is well known in the industry having served as a director of the U. S. Chamber of Commerce and the National Automobile Chamber of Commerce. He will resume active participation in his various interests connected with the automotive industry.

Carl Abell, advertising manager of the American Car & Foundry Motors Co., has been transferred to the Pacific Coast sales force. He will be succeeded by James J. McMahon, formerly of the sales promotion department of the International Motor Co.

John A. Servas has been appointed manager of the National Standard Parts Association show to be held in Cleveland, Nov. 1.



Yellow Coach & Truck Manufacturing Co. executives present at the turning of first shovelful of earth for new Pontiac factory

They are, from left to right: M. T. Boden, assistant to the president; H. J. Warner, works manager; Louis Ruthenberg, assistant general manager; J. E. Humphrey, assistant to the president; Paul W. Seiler, president and general manager; P. H. Welhener, Pontiac branch manager; V. G. Phillips, general sales manager; Col. G. A. Green, vice-president in charge of engineering; J. A. Murray, factory manager; and W. F. Maybury, comptroller

FIRE completely destroyed the plant of the Galion Metallic Vault Co., Galion, Ohio, early in June. While the company is covered by insurance the loss due to temporary suspension of business will be heavy. However, a new structure with new machinery is under construction and business will be resumed just as soon as possible. The dump body division which was located at one end of the plant was burned out at the same time.

THE first national convention of the Bus Division of the American Automobile Association held in Philadelphia last month accentuated the growing tendency to study the various difficulties confronting the bus industry in a more open-minded spirit. Among the speakers were: A. J. Brosseau, Mack Trucks, Inc.; F. J. Scarr, formerly supervisor of motor transportation, Pennsylvania Railroad System; Fred Klock, who presented B. W. Arnold's paper; C. T. McConnell, Cleveland - Ashtabula - Conneaut Bus Co.; H. G. Wells, Commissioner of Public Utilities, Mass.; H. R. Trombrower, University of Wisconsin; S. A. Markel; Tom Snyder, field representative of the division; and R. T. Senter, Philadelphia Rapid Transit Co.

J. A. Morris has joined the Autocar factory organization as assistant sales manager. Mr. Morris was formerly identified with the sale of Mack trucks. In his new capacity he will be the traveling executive in charge of dealers and dealer sales.

HOWARD E. SNEATHEN has been appointed director of commercial car and truck sales, of Dodge Brothers. Mr. Sneathen was formerly Dodge Brothers district representative at Chicago and Des Moines. R. L. Biggers was placed in charge of sales promotional and development work of the same division. Mr. Biggers has been with Dodge Brothers since 1920 when the company first entered the truck field.

Arcadia Truck Body Corp. is the name under which the Arcadia Trailer & Mfg. Corp., New York, N. Y., will be known in the future. The company will continue to make trailers, but will concentrate on truck bodies and cabs. This change does not affect the personnel.

R. W. Moore has been appointed manager of the White Company's Portland district. Mr. Moore comes from Oakland, Cal., where he has been branch manager for the past year.

THE industry's payroll for May, 1927, is 0.9 per cent higher than May, 1926, but the number of workers decreased 2 per cent, according to U. S. Bureau of Statistics of the Department of Labor. The number of workers for May, 1927, however, exceeded April, 1927, by 923. May totaled 338,816 workers.

George Kuhlman has been appointed district manager for the Heil Co. covering the Eastern territory with headquarters at the Heil branch, Rawson St. and Queens Blvd., Long Island City, N. Y. Mr. Kuhlman has been associated with the company since 1919.

BUS operators of Indianapolis showed a deficit of \$890,647 in 1926, according to figures presented by the public service commission. Revenues totaled \$5,176,652 and expenses including depreciation, \$6,067,299. The Shore Line Motor Coach Co. showed the greatest loss with a deficit of \$222,837.

PEACH growers of North Carolina are experimenting with trucks in the transportation of peaches to northern markets. Heretofore peaches have been shipped exclusively by rail. While this method has been fairly satisfactory, the loss from delay at junction points, broken crates, etc., has been high.

Growers and packers who have been using trucks this year say that they can get quicker and safer delivery and that there is very little difference in cost. New York is about two days from the orchards. Growers state that if the trucks stand up through the season all peach growers will use trucks next year for Washington, Baltimore, Philadelphia and New York shipments.

C. W. Hall has joined the sales department of the Duplex Truck Co. Mr. Hall was formerly manager of the Lansing branch of the Olds Motor Works, and later with the Reo Motor Car Co.

ROY A. HAUER, manager of the bus department of the Mack-International Motor Truck Corp., was elected a vice-president of the company at the June meeting of the directors.

Coming Events

SHOWS

- Chicago Nov. 7-12
Exposition, Coliseum, Automotive Equipment Association.
- *Chicago Jan. 28-Feb. 4
National, Coliseum, National Automobile Chamber of Commerce.
- Cleveland Oct. 3-7
Public Auditorium, American Electric Railway Assn.
- Cleveland Nov. 14-19
Convention Hall, National Standard Parts Association.
- Cleveland Jan. 9-13
Public Auditorium, American Road Builders' Assn.
- Des Moines Feb. 20-25
Coliseum.
- Green Bay, Wis. Aug. 29-Sept. 2
Auto Building.
- Minneapolis Feb. 4-11
Municipal Auditorium.
- *New York Jan. 7-14
National, Grand Central Palace, National Automobile Chamber of Commerce.

CONVENTIONS

- American Electric Railway Association, Public Auditorium, Cleveland Oct. 3-7
- American Road Builders' Assn., Hotel Hollenden, Cleveland Jan. 9-13
- Automotive Equipment Association, Coliseum, Chicago Nov. 7-12
- National Association of Automobile Show and Association Managers, Drake Hotel, Chicago July 28-29
- National Standard Parts Association, Hotel Hollenden, Cleveland Nov. 14-19

S. A. E.

- Chicago, November—National Transportation and Service Meeting.
- New York, Jan. 12—Annual Dinner.
- Detroit, Jan. 24-27—Annual Meeting.

*Will have Special Shop Equipment Exhibit.

GRAMM MOTORS, INC., Delphos, Ohio, has filed papers with the secretary of the state increasing its 7 per cent preferred stock from 1000 to 2500 shares of \$100 par value, and common stock from 5000 to 6500 shares with no designated par value. The amendment also provides that if four consecutive dividends are passed preferred stockholders are given a vote at any stockholders' meeting, which privilege is retained until past dividends are paid.

TO date applications have been received for more than 100,000 sq. ft. of space at the annual convention of the American Electric Railway Association in Cleveland, next October. This figure is well above the reservations made by exhibitors at comparable dates in previous years.

W. G. Clay, sales manager of the Seiden Company, reports truck sales for June, 21 per cent greater than for June, 1926. The increase is attributed to the new three-ton Roadmaster speed truck.

SPLITDORF-BETHLEHEM ELECTRICAL CO. has insured each of its employees in the sum of \$1,000, according to Walter Rautenstrauch, president. The plan includes a total permanent disability benefit as well as coverage on the life of the employee. The protection is afforded without expense to the employee.

H. L. Williams, until recently field editor for the Chilton Class Journal Publications, has been appointed sales promotion manager for the Bendix Corporation and its subsidiary, the Bendix Brake Company of South Bend, Ind.

Howard H. Tewksbury, formerly in the export department of General Motors Corp., has been appointed automotive trade commissioner for South America by the Bureau of Foreign and Domestic Commerce. Mr. Tewksbury has been with the department for six years.

MOTOR truck and bus registrations in the United States during the first six months of 1927 totaled 2,610,757 as compared with 2,407,201 in the corresponding period of 1926, a gain of 203,556 or slightly more than eight per cent, according to the annual mid-year survey made by Automotive Industries.

Diamond T Motor Car Co. announces the following dealer representatives: H. G. Keith, Inc., Cambridge, Mass.; Schafer Motor Truck Co., Springfield, Ill.; J. M. Crinigan, Decatur, Ill.; and Schildkraut-Mayer Co., Jamaica, Long Island, N. Y.

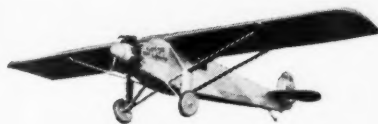
GENERAL MOTORS ACCEPTANCE CORP. has requested authority to increase its capital from \$25,000,000 to \$35,000,000, this increase to be effected through the sale of 100,000 shares of stock of General Motors Corp. at a premium price of \$125 a share.

IN THE FOUR GREAT AIR ACCOMPLISHMENTS!

WRIGHT ENGINES

EQUIPPED WITH

BETHLEHEM DROP FORGINGS



Spirit of St. Louis, Ryan Mono-
plane, in which Colonel Charles
Lindbergh made the first non-stop
flight between New York and
Paris.



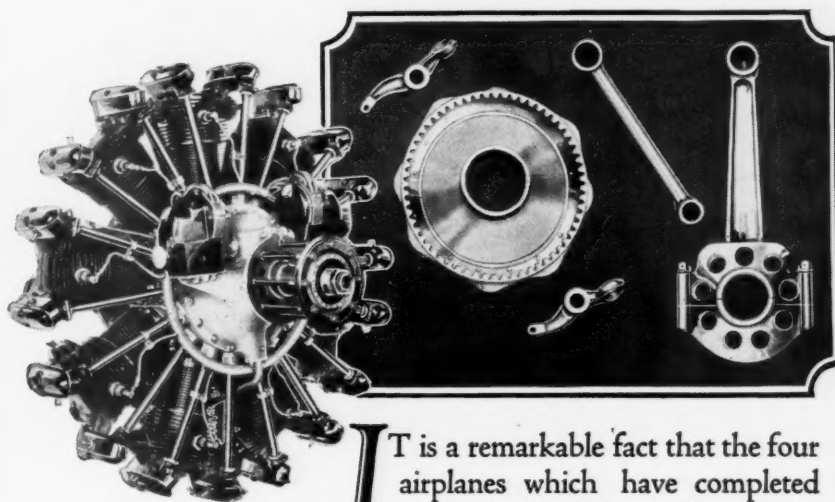
The Bellanca Monoplane *Columbia*
in which Chamberlin and Levine
made their non-stop flight from
New York to Eisleben, Germany.



Tri-motored Fokker Monoplane,
in which Lieutenants Maitland
and Hegenberger made the first
non-stop flight between San
Francisco and Hawaii.



Tri-motored Fokker Monoplane
America, in which Commander
Byrd, with Acosta, Noville and
Balchen, crossed the Atlantic in
the interest of aeronautical science.



It is a remarkable fact that the four
airplanes which have completed
trans-oceanic flights within the past
few weeks are all propelled by Wright Whirlwind engines.

Each of the eight engines on the four planes is equipped
with these important parts, made of Bethlehem Alloy Steel
Drop Forgings—

- 1 Master Connecting Rod
- 8 Articulated Connecting Rods
- 1 Inlet and Exhaust Cam
- 9 Inlet Valve Rocker Arms
- 9 Exhaust Valve Rocker Arms

It is very gratifying to us to have been able to contribute
so definitely to the success of these pioneer expeditions.



BETHLEHEM STEEL COMPANY
General Offices: BETHLEHEM, PA.

DISTRICT OFFICES:

New York	Boston	Philadelphia	Baltimore	Washington	Atlanta	Pittsburgh
Buffalo	Cleveland	Detroit	Cincinnati	Chicago	St. Louis	San Francisco
		Los Angeles	Seattle	Portland		

Bethlehem Steel Export Corporation, 25 Broadway, New York City
Sole Exporter of Our Commercial Products

GOLD MEDALS

awarded Bethlehem at the
recent Sesqui-Centennial
Exposition, Philadelphia,
in recognition of the
high quality of both Beth-
lehem Alloy Steels and
Drop Forgings.



BETHLEHEM

AN outdoor truck show featured the annual outing of the Pennsylvania Motor Truck Association held in Philadelphia last month which was largely attended by both dealer and operator members of the organization. A baseball game between truck owners and dealers was strongly contested, as were other athletic events. Prizes, which were given by members, were presented during the annual dinner in the evening.

H. C. Barron has been transferred from the New York district for Dodge Brothers to the northwest in charge of that district with headquarters in Seattle.

By declaring a dividend of 80 cents a share a year payable July 30, Continental Motors Corp. will have paid to stockholders in 1927 a total of \$1,056,507.

ACCORDING to a tabulation of a world census returns compiled by the U. S. Department of Commerce the total truck registration for the world as of Jan. 1, 1927, is 3,936,965; bus registrations total 194,374. The United States leads with 2,764,222 trucks and 80,000 buses; France follows with 280,000 trucks and 26,000 buses; United Kingdom, Germany, Canada and Australia then follow in the order named.

Two new and larger branches have been established in Detroit and San Francisco by the Electric Storage Battery Co. The Detroit branch has moved from 5740 Cass Ave. to 8051 West Chicago Blvd. H. G. Carron is manager of this branch. The San Francisco branch is located at 6150 Third St. The manager is G. R. Murphy.

NEGOTIATIONS are practically completed whereby the Gotfredson Corp., Ltd., of Canada, will absorb the Wayne Body Corp. of which the Gotfredson Truck Corp. is a subsidiary. By the plan, the Canadian company will acquire all the stock of the American company and will also purchase the Wayne Body Corporation's factory at Cleveland. Sale of the Wayne's main body plant at Wayne, Mich., to the three Graham brothers recently paved the way for the reorganization of the Gotfredson interests.

Lee M. Clegg has been promoted to general sales manager of both the original and replacement divisions of the Cleveland and Detroit plants of Thompson Products, Inc. L. J. Scott will be sales manager at Detroit and Burke Patterson sales promotion manager at Cleveland.

Thomas P. Henry was reelected to the presidency of the American Automobile Association for the fifth consecutive time at the final session of the annual meeting of the organization held at Philadelphia in June.

WEAKNESSES in the rubber market late in June brought the prices on the Rubber Exchange down to 35 cents. Rumors to the effect that the American pool of rubber producers was liquidating had been one of the causes of the heavy selling. It is announced, however, that the pool had been advanced eight months from August 1.



Section of the Pennsylvania Motor Truck Association's outdoor truck exhibit

According to Chilton Class Journal Company's latest revised trade list, 22,920 dealers handle both passenger cars and trucks and 1724 dealers sell trucks exclusively.

A STUDY is being made of the points at which automotive equipment for the various makes of trucks can be obtained with the object in view of insuring the availability and elimination of delays in the delivery of parts in all sections of the country was a statement made by L. A. Safford, president, McQuay-Norris Mfg. Co. at the Automotive Equipment Association convention in Portland, Ore.

C. G. Rowan, manager of the Kansas City Branch of the Diamond T Motor Car Co., has won first place in a sales contest with the Pittsburgh, Pa., and St. Louis branches. The Kansas City branch reported 12 sales during a special 18-day contest.

A TOTAL of 5730 Graham Brothers units shipped to Dodge Brothers dealers in June exceeded the record in May and brought the six months record to 29,677 trucks and commercial cars.

Frederick J. Haynes, chairman of Dodge Brothers, Inc., has accepted the presidency of the Detroit Board of Commerce.

N. Carolina School Buses Travel 51,869 Miles

NORTH CAROLINA leads all states of the Union with a total school-bus mileage of 51,869 miles, according to the N. C. department of public instruction. New York is second with a mileage of 20,000. The announcement stated that 80,000 school children were transported daily in North Carolina, at a total cost for the school year of \$1,302,720.

The school systems of the nation spent \$23,000,000 during the recently closed school year in the transportation of 872,745 school children in 32,595 buses over 327,243 routes, the announcement further stated.

AN income tax ruling that may facilitate new truck sales on a trade-in basis has just been made by the Treasury Department, according to Seidman & Seidman, certified public accountants. Under this ruling no profit need be reported when a truck or passenger car used for business purposes is traded in for a new one, even though the trade-in allowance of the old vehicle is more than its cost less depreciation.

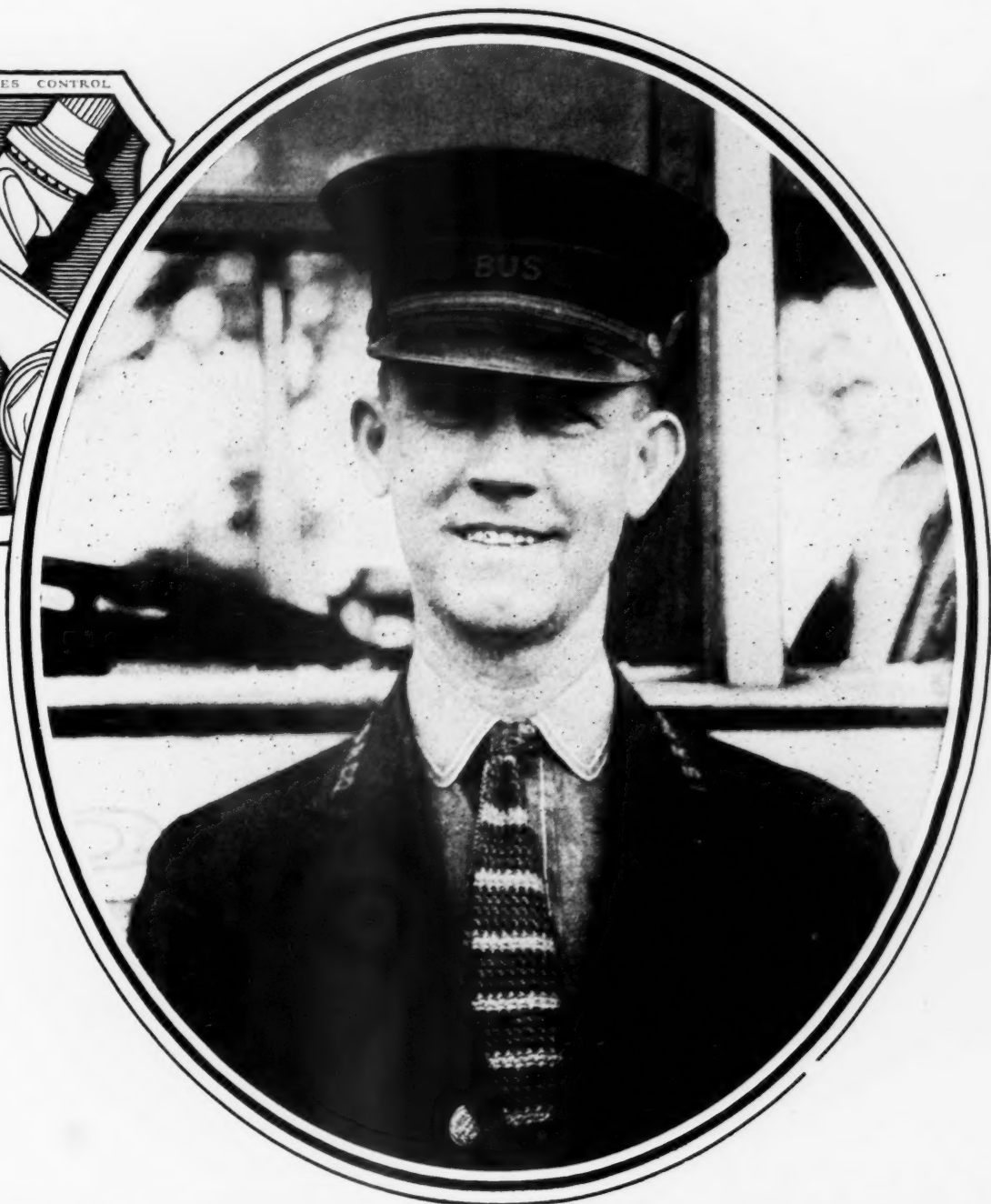
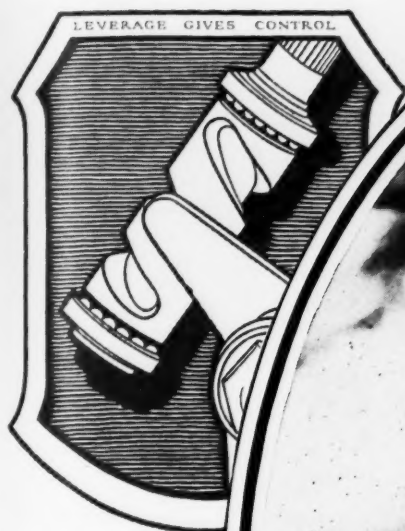
A. G. Partridge, formerly vice-president in charge of sales of Firestone Tire & Rubber Co., has been appointed manager of the western division of Good-year Tire & Rubber Co., succeeding R. S. Wilson, who has been appointed advertising manager. Mr. Wilson succeeds L. L. King, resigned.

BUSES cannot operate without a franchise on the streets of Louisville, Ky., was the decision of the Jefferson Circuit Court and affirmation of the Court of Appeals. Contending that it paid license and city taxes the People's Transit Company sought to operate buses on the main street of Louisville. The Louisville Railway fought the application on the basis that it was unconstitutional to operate without a franchise. The decision only affects intra-city operation.

A. W. Scarratt has been appointed chief engineer of the motor truck and coach division of the International Harvester Co. Mr. Scarratt resigned as chief engineer of the Hyatt Roller Bearing Co. He was also chief engineer of the Minneapolis Steel & Machinery Co.

H. C. Russel has accepted a position with the Indiana Truck Corp., Marion, Ind., as Ohio district sales manager, succeeding M. E. Brackett, resigned. Mr. Russel has a wide experience in the truck industry covering a period of many years.

THE recent action of the Detroit Automobile Dealers Association to ban Sunday sales of new cars and trucks, it is believed, will start a national movement for the abolition of seven-day-a-week business in retail automotive merchandising. Members, however, decided to keep the used vehicles and service departments open.



ASK HIS WIFE . . . SHE KNOWS

JOE'S "little woman" will tell you he's got a good job. She'll tell you that Joe comes home smiling and serene—ready for a romp with the kids, or a "garden party" with a heavy hoe. And if you'd ask Joe about it he'd tell you the Ross Cam and Lever Steering Gear makes his bus handle so easily and safely that he doesn't get the nerve strain and fatigue that leave so many drivers "all in" at night . . . The men who man Ross-equipped buses have fewer accidents, more courtesy for patrons and stick to their jobs longer. Naturally they make more money and good-will for the boss. Let us tell you about Ross.

ROSS GEAR AND TOOL COMPANY . . . Lafayette, Indiana

Member Motor Truck Industries, Inc., of America

ROSS
CAM and LEVER  **STEERING GEARS**

EASIER STEERING LESS ROAD SHOCK



2 Trucks }
1 Year } \$ **6⁴⁹**

Average load 8 tons, on truck and trailer. Oil field service, as tough as they make it. \$6.49 total actual cost of all replacements for a whole year, on both Republic outfits owned by George Uhl & Sons, Eureka, Kansas.

The Republic 3-ton truck Model 25 WB, has become the oil field favorite on the strength of such everyday showings.

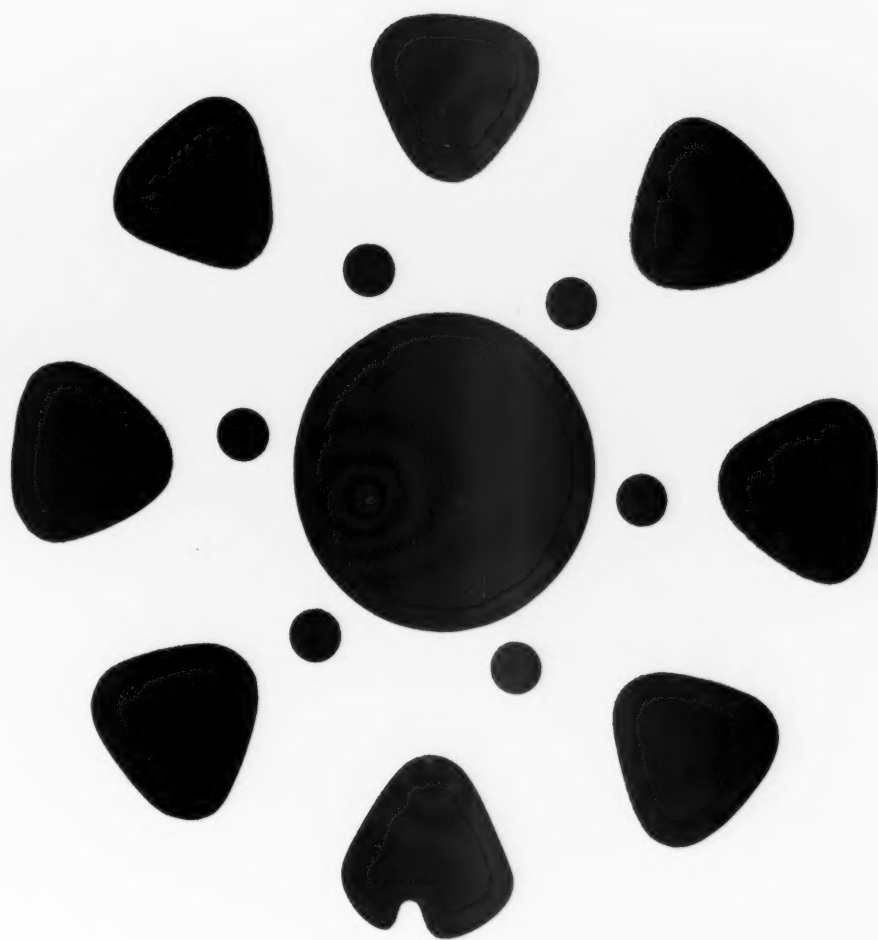
Powerful beyond any demands of merciless, roadless oil field transportation, Republics at the same time assure matchless operating economy, smoothness, speed and maneuverability. The first Republic in a fleet is usually the beginning of an all-Republic fleet. That's the result of performance, first cost, and the many extra years over which the investment spreads!



REPUBLIC MOTOR TRUCK CO., INC., Alma, Michigan

—and a nation-wide organization of Branches and Distributors to enable every Republic to deliver ALL that is built into it.

REPUBLIC *Yellow Chassis* **TRUCKS**



The Strongest Wheels
ever built for
Buses and Trucks



Spoksteel *by* M

The Strongest Wheels ever built for Buses and Trucks

A Product of the World's Largest Wheel Manufacturers

Demountable at the Hub—Interchangeable on Hubs for Dual Steel Wheels

The Spoksteel wheel combines the super-strength of a one-piece forged steel wheel member with the convenience and other recognized advantages of spoke construction. No previous type of wheel has ever approached the Spoksteel average of durability, safety, weight-saving, coolness, quiet, easy maintenance, and fine appearance. This far-reaching advance is the result of years of development by Motor Wheel, world's largest wheel makers.

For the first time, highest grade material is used in a steel wheel. Strength is multiplied. Every form of stress is accurately distributed.

The mounting is as much better as the wheel itself. Larger studs are possible; they take no radial stress at all, and at least 50% less torque. Hence Spoksteel equipment assures the highest possible resistance to shock, looseness, and permanent deflection.

The inherent advantages of Spoksteel design and construction are fully realized in service, because these wheels must mount perfectly—there is no other way. All studs and nuts are right-hand; in

dual mounting the inner wheels stay in place independently; and the final locking is positive.

Reducing depreciation, maintenance and labor costs, Spoksteel wheels also produce many indirect economies. Tires are protected by the excellent radiation properties of Spoksteel wheels. Proper inflation is encouraged because valves are accessible. Brake wear is less and adjustments are fewer because Spoksteel wheels can be kept clean on the inner side.

Wheel noises cannot develop in Spoksteel wheels, and chassis sounds are not magnified. Spoksteel silence and good looks are factors in attracting and holding bus business. Spoksteel design and construction assure lowest wheel and tire costs in handling the business.

It is another of the notable developments which are responsible for the clear leadership of Motor Wheel. A test set of Spoksteel wheels—readily applied to standard hubs—will reveal new possibilities for improving production and operation of buses and trucks of every type.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Wheel

Strongest

Easiest Mounting, Inflation, Cleaning and Care

High Carbon Forged Steel

The practical application of this far better wheel material was made possible only by Motor Wheel experience and facilities. Spoksteel wheels are far stronger without excess weight—important in reducing tonnage—and vital in relieving tires.

Cool Running

The spoked design, character of material, rim application, and mounting of Spoksteel wheels all tend to improve radiation. Impartial competitive tests have recorded the ability of Spoksteel wheels to keep tires many degrees cooler—much further below critical temperatures.

Perfect Mounting

Piloted to hubs, Spoksteel wheels assure best load distribution over greatest possible area. The studs used greatly exceed standard strength, carry no radial load, and only a fraction of the torque. Broken studs, chewed-up holes and cracked wheels become a thing of the past.

Positive Locking

The Spoksteel locking flange is a development of the pioneer Motor Wheel design which has been one of the chief factors in the general success of steel wheels. Complication and delicate parts are eliminated. Incorrect application is quite impossible. Wheel changes are facilitated because spoke-type wheels are always more easily handled. And in dual service the inner Spoksteel wheel stays in place positively while the second wheel is applied. Both wheels lock with one operation.

Silence, Cleanliness, Convenience

Spoksteel wheels are permanently silent and they do not "cage" or magnify other chassis sounds. Dirt is not stored up and dumped into the brakes. Tire inflation is easy and quick. In emergencies, wheel repairs can be properly made without special costly machinery or factory facilities.

Single and Dual

The full advantages of pneumatic tires are now available for every operator of buses or trucks. An experimental set of Spoksteel wheels—single and dual—will set up new figures for low-cost and high-mileage.

MOTOR WHEEL CORPORATION
L A N S I N G , M I C H I G A N



Commercial Car Specifications—Correct Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

Those Chassis Which Are Sold and Recommended for Bus Use Are Designated in the Following Table by Reference Sign (\$) in Front of the Name For Motor Bus Chassis See Pages 48 and 49

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Key of abbreviations, page 50

Trade Name and Model	General			Engine						Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Chassis Weight (lbs.)						
	Standard Wheelbase (inches)	Tire Size		Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System			Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model	Location	No. of Forward Speeds						Universals (Make)	Own Cap	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
		Front (inches)	Rear (inches)							Carburetor (Make)	Fuel Feed																		
1000 Pounds																													
Chevrolet Cap. Com. Ch.	395 103	B 29x4 40	B 29x4 40	4-3 1/2x4 1/2	21.7 H	PC	PS	Non	Har	Car	V	Rem	Rem	P. Own	Own Cap.	U	U	3.82	12.68	A	Own	S.S.	Jax	1550					
	110	B 29x4 75	B 29x4 75	6-3 1/2x4 1/2	25.3 L	PC	PC	Non	Har	Car	V	Rem	Rem	P. Own	Own	U	U	4.18	13.92	A	Own	Jax	1820						
	470 103	P 30x3 1/2	P 30x3 1/2	4-3 3/4x4 1/2	18.2 L	PC	PC	Non	Fed	Til	V	A-L	A-L	A-L	Own	Own	A	A	4.57	16.16	A	Own	Hay	1500					
1500 Pounds																													
Graham Bros. No. 1	670 116	B 31x5 25	B 31x5 25	4-3 3/4x4 1/2	24.0 L	SP	SP	Non	McG	Ste	V	N-E	N-E	P. B&B	Own	U	U	4.17	17.21	A	Dodge	Bea	Kal	2160					
	116	B 30x5 25	B 30x5 25	6-2 1/2x4 1/2	19.8 L	PC	PC	Non	Lon	Str	G	Rem	Rem	Roc	M.M.	U	U	4.45	17.21	B	Tim 12300	D-G	Kal	2000					
	1450 136	P 30x5 25	P 30x5 25	4-3 1/2x4 1/2	19.8 L	PC	PC	Non	Own	Str	G	G	Rem	Rem	D. Own	B-L 20	U	U	5.36	30.0	B	Own	Own	Fir	3000				
Kleber	895 118	B 30x5 25	B 30x5 25	6-2 1/2x4 1/2	22.5 L	SP	SP	Non	Own	Str	G	Rem	Rem	L-N	Own	U	U	4.8	18.6	A	Own	Own	Own	Fir	2250				
	1545 133	P 34x5	P 34x5	4-3 3/4x5 1/2	22.5 L	SP	SP	Non	Own	Str	G	N-E	N-E	P. Own	Own	U	A	5.36	18.6	A	Own	Own	Own	Fir	3225				
	1295 109	P 29x4 1/2	P 29x4 1/2	4-3 1/2x5 1/2	18.9 X	PC	PC	Non	Lon	Zen	Zen	G	Rem	Rem	Own	15	U	3	4.90	16.3	B	Tim 1341	Day	Fir	2500				
1 Ton																													
Acme 16	120	P 30x5	P 30x5	4-3 3/4x4 1/2	18.2 L	PC	PC	Non	Per	Til	V	A-L	A-L	P. B&B	M.M.	U	U	6.1	18.03	A	Sal SK267	D-G	Bim	Fir	2000				
	120	P 30x5	P 30x5	6-2 1/2x4 1/2	18.2 L	PC	PC	Non	Per	Til	V	A-L	A-L	P. B&B	M.M.	U	U	6.1	18.03	A	Sal SK267	D-G	Bim	Fir	2100				
	2050 144	P 34x5	P 34x5	4-4 1/4x4 1/2	25.3 L	PP	PP	Non	Fed	Zen	G	Bos-R	G&D	D. Ful	Ful	SU12	U	3	5.66	22.6	A	Shu 310	Tut	Shu	3600				
Atterbury 20B	132	P 30x5	P 30x5	4-3 1/2x4 1/2	19.6 L	PP	PP	Non	Bus	Zen	G	A-L	A-L	P. B&B	Ful	31	U	3	5.6	18.7	A	Shu	Bim	Fir	3470				
	138	P 30x5	P 30x5	6-3 3/4x4 1/2	27.3 L	PP	PP	Non	Own	Zen	G	D. B-L	D. B-L	P. B&B	B-L 30	U	3	6.86	27.4	A	Eat 750	Mat	Van	2880					
	138	P 30x5	P 30x5	4-3 3/4x5 1/2	22.5 L	PP	PP	Non	G&O	Zen	V	A-L	A-L	P. Own	Own	Cap.	U	3	5.5	27	A	Shu	Mat	Ros	3200				
Bederman	130	P 30x5	P 30x5	4-3 3/4x4 1/2	21.7 H	PP	PP	Non	Har	Zen	V	Rem	Rem	P. Own	Own	Cap.	U	3	4.7	19.25	A	Col 1624	Row	Gem	Fir	2990			
	485 124	B 29x4 40	B 29x4 40	4-4 1/4x4 1/2	25.6 L	PP	PP	Non	Chi	Zen	V	Apo	A-L	D. B-L	B-L 31	U	3	5.43	18.03	A	Own	S.S.	Own	Jax	2030				
	132	P 30x5	P 30x5	4-4 1/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	A-L	A-L	D. B-L	B-L 31	U	3	5.66	27.16	A	Tim 12300	Mat	Ros	Smi	Fir	3240			
Chicago 10	130	P 30x5	P 30x5	4-3 3/4x4 1/2	22.5 L	PP	PP	Non	Own	Zen	G	A-L	A-L	P. Own	Own	Cap.	U	3	6.43	30.86	A	Tim 1250	Per	Ros	Smi	Fir	3450		
	130	P 30x5	P 30x5	6-3 3/4x4 1/2	19.8 L	PP	PP	Non	Own	Zen	G	A-L	A-L	P. Con	Cov	JUH	U	3	5.66	20.5	A	Shu 310	Bea	Ros	Smi	Fir	2900		
	132	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Smi	Fir	3025			
Concord K	1345 124	P 34x5	P 34x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	G&O	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
	130	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	130	P 30x5	P 30x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	Own	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
Day-Elder M.	1345 124	P 34x5	P 34x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	G&O	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
	130	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	130	P 30x5	P 30x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	Own	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
Diamond 17A	1345 124	P 34x5	P 34x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	G&O	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
	130	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	130	P 30x5	P 30x5	4-4 1/2x4 1/2	25.6 L	PP	PP	Non	Own	Zen	G	Apo	A-L	D. Ful	Ful	JUC	U	3	5.8	23.2	A	Con 1631	Det	Ros	Cha	Fir	3100		
Federal Scout	995 124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
Federal Knight	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
Fisher's Express	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
Ford T	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
GMC K-20	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
GMC T-20	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
Graham Bros. BC	865 124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	6-2 1/2x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
	124	P 30x5	P 30x5	4-3 3/4x4 1/2	25.3 L	PP	PP	Non	Own	Zen	G	Rem	Rem	D. B-L	B-L 20B	U	3	6.14	20.45	A	Eat 760	Mat	Ros	Cha	Fir	3100			
Graham Bros. IC	1020 137	P 33x5	P 33x5	4-3 3/4x4 1/2	24.0 L	SP	SP	Non	McG	Ste	G	N-E	N-E	P. B&B	Own	U	3	5.10	21.08	A	Dodge	Det	Det	Fir	3000				
	133	P 30x5	P 30x5	4-3 3/4x4 1/2	24.0 L	SP	SP	Non	McG	Ste	G	N-E																	

Trade Name and Model	General			Engine				Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Brakes, Location	Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Chassis Weight (lbs.)			
	Standard Wheelbase (Inches)	Tire Size		Make and Model	Bore and Stroke	N.A.C.C. Rated H.P.	Engine		Radiator (Make)		Fuel System		Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model							Type	Total Reduction in High	Total Reduction in Low
		Front (Inches)	Rear (Inches)				Valve Arrangement	Oiling System			Governor (Make)	Radiator (Make)													
1 Ton—Cont'd																									
Lerabee A3	P 30x5	P 30x5	P 30x5	Con 11U	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Fed	Zen	G	Rem	Rem	D, B-L	B-L 20B	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3100	
Le Moon H-10	P 30x5	P 30x5	P 30x5	Con 12C	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Chi	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Lauchinghaus	P 30x5	P 30x5	P 30x5	Con 13A	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	2850	
Menominee	P 30x5	P 30x5	P 30x5	Con 14B	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Per	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Naab 2018	P 30x5	P 30x5	P 30x5	Con 15C	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Parker Chariot	P 30x5	P 30x5	P 30x5	Con 16D	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Chi	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Sandow	P 30x5	P 30x5	P 30x5	Con 17E	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Sandow GA	P 30x5	P 30x5	P 30x5	Con 18F	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Schmidt	P 30x5	P 30x5	P 30x5	Con 19G	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Service 25H	P 30x5	P 30x5	P 30x5	Con 20H	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Star Fleetruk	P 30x5	P 30x5	P 30x5	Con 21I	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Fed	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Stewart Buddy	P 30x5	P 30x5	P 30x5	Con 22J	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Per	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	2400	
United 16C	P 30x5	P 30x5	P 30x5	Con 23K	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	2500	
U.S. U.	P 30x5	P 30x5	P 30x5	Con 24L	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Wachusett S.	P 30x5	P 30x5	P 30x5	Con 25M	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3400	
Yellow Cab T-1	P 30x5	P 30x5	P 30x5	Con 26N	25 3/4 x 4 1/2	25 3/4 L	PC	Non	G&O	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3300	
Yellow Knight T2	P 30x5	P 30x5	P 30x5	Con 27O	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3210	
Yellow Knight T2	P 30x5	P 30x5	P 30x5	Con 27O	25 3/4 x 4 1/2	25 3/4 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	2605	
1 1/4 Ton																									
Acme 24	P 30x5	P 30x5	P 30x5	Con 28P	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Per	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3450	
Biederman	P 30x5	P 30x5	P 30x5	Con 29Q	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Han	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3600	
Clinton 20B	P 30x5	P 30x5	P 30x5	Con 30R	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3750	
Clydesdale 10A	P 30x5	P 30x5	P 30x5	Con 31S	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3250	
Gramm 23N	P 30x5	P 30x5	P 30x5	Con 32T	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Han	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3485	
Gramm 263 N	P 30x5	P 30x5	P 30x5	Con 33U	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3855	
Gramm-Bernstein 10	P 30x5	P 30x5	P 30x5	Con 34V	28 9/16 x 4 1/2	28 9/16 L	PC	Non	G&O	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3020	
Guider B.	P 30x5	P 30x5	P 30x5	Con 35W	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3250	
Guider B-6	P 30x5	P 30x5	P 30x5	Con 36X	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Chi	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Hahn B2	P 30x5	P 30x5	P 30x5	Con 37Y	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3025	
Int. Harvester S-24	P 30x5	P 30x5	P 30x5	Con 38Z	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3090	
Int. Harvester S-26	P 30x5	P 30x5	P 30x5	Con 39A	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3700	
Macrae 36	P 30x5	P 30x5	P 30x5	Con 40B	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Lon	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3700	
Master 11	P 30x5	P 30x5	P 30x5	Con 41C	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Chi	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3855	
Noble 124	P 30x5	P 30x5	P 30x5	Con 42D	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3950	
Reo F	P 30x5	P 30x5	P 30x5	Con 43E	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	2900	
Reo F-1	P 30x5	P 30x5	P 30x5	Con 44F	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-2	P 30x5	P 30x5	P 30x5	Con 45G	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-3	P 30x5	P 30x5	P 30x5	Con 46H	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-4	P 30x5	P 30x5	P 30x5	Con 47I	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-5	P 30x5	P 30x5	P 30x5	Con 48J	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-6	P 30x5	P 30x5	P 30x5	Con 49K	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-7	P 30x5	P 30x5	P 30x5	Con 50L	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-8	P 30x5	P 30x5	P 30x5	Con 51M	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-9	P 30x5	P 30x5	P 30x5	Con 52N	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-10	P 30x5	P 30x5	P 30x5	Con 53O	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-11	P 30x5	P 30x5	P 30x5	Con 54P	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-12	P 30x5	P 30x5	P 30x5	Con 55Q	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-13	P 30x5	P 30x5	P 30x5	Con 56R	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-14	P 30x5	P 30x5	P 30x5	Con 57S	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-15	P 30x5	P 30x5	P 30x5	Con 58T	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-16	P 30x5	P 30x5	P 30x5	Con 59U	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-17	P 30x5	P 30x5	P 30x5	Con 60V	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-18	P 30x5	P 30x5	P 30x5	Con 61W	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-19	P 30x5	P 30x5	P 30x5	Con 62X	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-20	P 30x5	P 30x5	P 30x5	Con 63Y	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-21	P 30x5	P 30x5	P 30x5	Con 64Z	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-22	P 30x5	P 30x5	P 30x5	Con 65A	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31	U	3	Spi	Sha B-365	Sha B-365	Ros	Smi	Fir	3000	
Reo F-23	P 30x5	P 30x5	P 30x5	Con 66B	28 9/16 x 4 1/2	28 9/16 L	PC	Non	Own	Zen	G	Del	Del	D, B-L	B-L 31										

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*For export only

Key of abbreviations, page 50

Trade Name and Model	General		Engine					Electrical System		Clutch	Gearset		Rear Axle	Gear Ratios		Brakes, Location	Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)									
	Standard Wheelbase (Inches)	Tire Size	Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)		Fuel System			Ignition System (Make)	Generator and Starter (Make)								Type and Make	Make and Model	Location	No. of Forward Speeds	Universal (Make)	Make and Model	Final Drive	Total Reduction in High	Total Reduction in Low
											Carburetor (Make)	Fuel Feed																			
2 1/2 Ton—Cont'd																															
Biederman.....	100	S 36x10	Con 6B	6-34.5	33 7/8	T	PC	Han	Owi	Zen	G	Del	Del	D-B-L	B-L-51	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Chicago 25.....	168	S 36x8	Her OX	4-45	25 6/8	L	PC	Pie	Chi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Pet	Tim 6500D	W	4	8.5	45.0								
Chicago 30.....	164	S 36x10	Bud DW-6	4-45	25 6/8	L	PC	Pie	Chi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Pet	Tim 6500D	W	4	8.5	45.0								
Clinton 55-6.....	168	P 36x26	Con K4	6-34.5	33 7/8	L	PC	Pie	Mod	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Blo	Cla B720	W	4	8.5	45.0								
Clydesdale 8.....	168	S 36x8	Bud HS	6-34.5	27 2/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Coleman D-40.....	130	P 36x7	Con K4	6-34.5	27 2/8	L	PC	Pie	R-T	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Corbett 54.....	152	S 36x8	Bud KBU	4-45.5	25 6/8	L	PC	Sim	Mon	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Day-Elder 1.....	144	S 36x4	Her O	4-45.5	25 6/8	L	PC	Pie	Mon	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Denby 43.....	165	S 36x4	Her K	4-44.5	25 6/8	L	PC	Pie	G&O	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Diamond T-14.....	161	P 36x7	Her L	4-44.5	25 6/8	L	PC	Pie	G&O	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Diamond T-16.....	162	P 36x7	Wau V	4-45	25 6/8	L	PC	Pie	Wau	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Fagel 20B.....	3500	S 36x4	Con K4	6-34.5	33 7/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Federal U.S.....	167	P 32x6	Con 6B	4-45.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Fisher Heavy Duty.....	155	S 36x5	Con 6B	6-34.5	33 7/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Fisher Heavy Duty.....	155	S 36x5	Con 6B	6-34.5	33 7/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
Garford 60.....	3750	S 36x4	Bud EBU-1	4-44.5	25 6/8	L	PC	K.P.	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42A.....	146	S 36x4	Con K4	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42B.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42C.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42D.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42E.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42F.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42G.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42H.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42I.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42J.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42K.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42L.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42M.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42N.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42O.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42P.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42Q.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42R.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42S.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42T.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42U.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42V.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42W.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42X.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42Y.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42Z.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AA.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AB.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AC.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AD.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AE.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AF.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AG.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AH.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AI.....	168	S 36x4	Owi	4-43.5	25 6/8	L	PC	Pie	Owi	Zen	G	Apo	Non	D-B-L	B-L-35	U	4	Spi	Tim 6500D	W	4	8.5	45.0								
G.M.C. K-42AJ.....	168	S 36x4	Owi	4-43.5	25 6/8																										

12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

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Trade Name and Model		Chassis Price		Standard Wheelbase (Inches)		Tire Size		Rear (Inches)		Front (Inches)		Make and Model		Number of Cylinders		Bore and Stroke		N.A.C.C. Rated H.P.		Valve Arrangement		Oiling System		Governor (Make)		Radiator (Make)		Fuel System		Ignition System		Generator (Make)		Type and Make		Clutch		Gearset		Universal (Make)		Make and Model		Final Drive		Total Reduction in High		Total Reduction in Low		Brakes, Location		Front Axle Make and Model		Springs (Make)		Steering Gear (Make)		Wheels (Make)		Rims (Make)		Chassis Weight (lbs.)																																																																																																																																											
Trade Name and Model		Chassis Price		Standard Wheelbase (Inches)		Tire Size		Rear (Inches)		Front (Inches)		Make and Model		Number of Cylinders		Bore and Stroke		N.A.C.C. Rated H.P.		Valve Arrangement		Oiling System		Governor (Make)		Radiator (Make)		Fuel System		Ignition System		Generator (Make)		Type and Make		Clutch		Gearset		Universal (Make)		Make and Model		Final Drive		Total Reduction in High		Total Reduction in Low		Brakes, Location		Front Axle Make and Model		Springs (Make)		Steering Gear (Make)		Wheels (Make)		Rims (Make)		Chassis Weight (lbs.)																																																																																																																																											
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Gasoline Tractor Trucks—Cont'd

Model	Capacity	Weight	Chassis Only	Chassis with Body	Wheelbase	Make and Model	Number of Cylinders	Engine	Radiator Make	Carburetor Make	Ignition System Make	Generator and Starter	Make	Volage and Amp.	High M. P. H.	Low M. P. H.	Clutch	Make and Model	Gearset	Transmission	Rear Axle	Front Axle	Steering Gear	Tires (in.)	Wheel-Make	Turning Radius (ft.)	Dimensions (in.)	Overall	Length	Width		
Int. Harvester 54C	122	3365	3365	3365	3365	Int. Harvester 54C	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Int. Harvester 74C	137	3400	3400	3400	3400	Int. Harvester 74C	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Mack AC 6-Ton	125	3400	3400	3400	3400	Mack AC 6-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Mack AC 7-Ton	128	3400	3400	3400	3400	Mack AC 7-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Mack AC 10-Ton	128	3400	3400	3400	3400	Mack AC 10-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Mack AC 12-Ton	128	3400	3400	3400	3400	Mack AC 12-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Mack AC 15-Ton	128	3400	3400	3400	3400	Mack AC 15-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Pierce-Arrow AB	133	3400	3400	3400	3400	Pierce-Arrow AB	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Pierce-Arrow RD	133	3400	3400	3400	3400	Pierce-Arrow RD	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Pierce-Arrow RF	133	3400	3400	3400	3400	Pierce-Arrow RF	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Saurer	145	3400	3400	3400	3400	Saurer	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Schmidt 7-Ton	145	3400	3400	3400	3400	Schmidt 7-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Schmidt 10-Ton	145	3400	3400	3400	3400	Schmidt 10-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Schmidt 12-Ton	145	3400	3400	3400	3400	Schmidt 12-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Schmidt 15-Ton	145	3400	3400	3400	3400	Schmidt 15-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Service 61	127	3400	3400	3400	3400	Service 61	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Service 103	131	3400	3400	3400	3400	Service 103	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Steincoing 6-Ton	127	3400	3400	3400	3400	Steincoing 6-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Steincoing 10-Ton	127	3400	3400	3400	3400	Steincoing 10-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Steincoing 12-Ton	127	3400	3400	3400	3400	Steincoing 12-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Steincoing 15-Ton	127	3400	3400	3400	3400	Steincoing 15-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 10-Ton	144	3400	3400	3400	3400	Stirling EW 10-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 12-Ton	144	3400	3400	3400	3400	Stirling EW 12-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 15-Ton	144	3400	3400	3400	3400	Stirling EW 15-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 20-Ton	144	3400	3400	3400	3400	Stirling EW 20-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 24-Ton	144	3400	3400	3400	3400	Stirling EW 24-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 28-Ton	144	3400	3400	3400	3400	Stirling EW 28-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 32-Ton	144	3400	3400	3400	3400	Stirling EW 32-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 36-Ton	144	3400	3400	3400	3400	Stirling EW 36-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 40-Ton	144	3400	3400	3400	3400	Stirling EW 40-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 44-Ton	144	3400	3400	3400	3400	Stirling EW 44-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 48-Ton	144	3400	3400	3400	3400	Stirling EW 48-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 52-Ton	144	3400	3400	3400	3400	Stirling EW 52-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 56-Ton	144	3400	3400	3400	3400	Stirling EW 56-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 60-Ton	144	3400	3400	3400	3400	Stirling EW 60-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 64-Ton	144	3400	3400	3400	3400	Stirling EW 64-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 68-Ton	144	3400	3400	3400	3400	Stirling EW 68-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 72-Ton	144	3400	3400	3400	3400	Stirling EW 72-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 76-Ton	144	3400	3400	3400	3400	Stirling EW 76-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 80-Ton	144	3400	3400	3400	3400	Stirling EW 80-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 84-Ton	144	3400	3400	3400	3400	Stirling EW 84-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 88-Ton	144	3400	3400	3400	3400	Stirling EW 88-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 92-Ton	144	3400	3400	3400	3400	Stirling EW 92-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 96-Ton	144	3400	3400	3400	3400	Stirling EW 96-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 100-Ton	144	3400	3400	3400	3400	Stirling EW 100-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 104-Ton	144	3400	3400	3400	3400	Stirling EW 104-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP	SP	Own	G	G	Boe-R	Opt	D	Own	Own	4	Own	C	D	8.15	48.0	B	Own	8.15	48.0	B
Stirling EW 108-Ton	144	3400	3400	3400	3400	Stirling EW 108-Ton	6-41x5 1/2	4-41x5 1/2	28.9	H	SP	SP</																				

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